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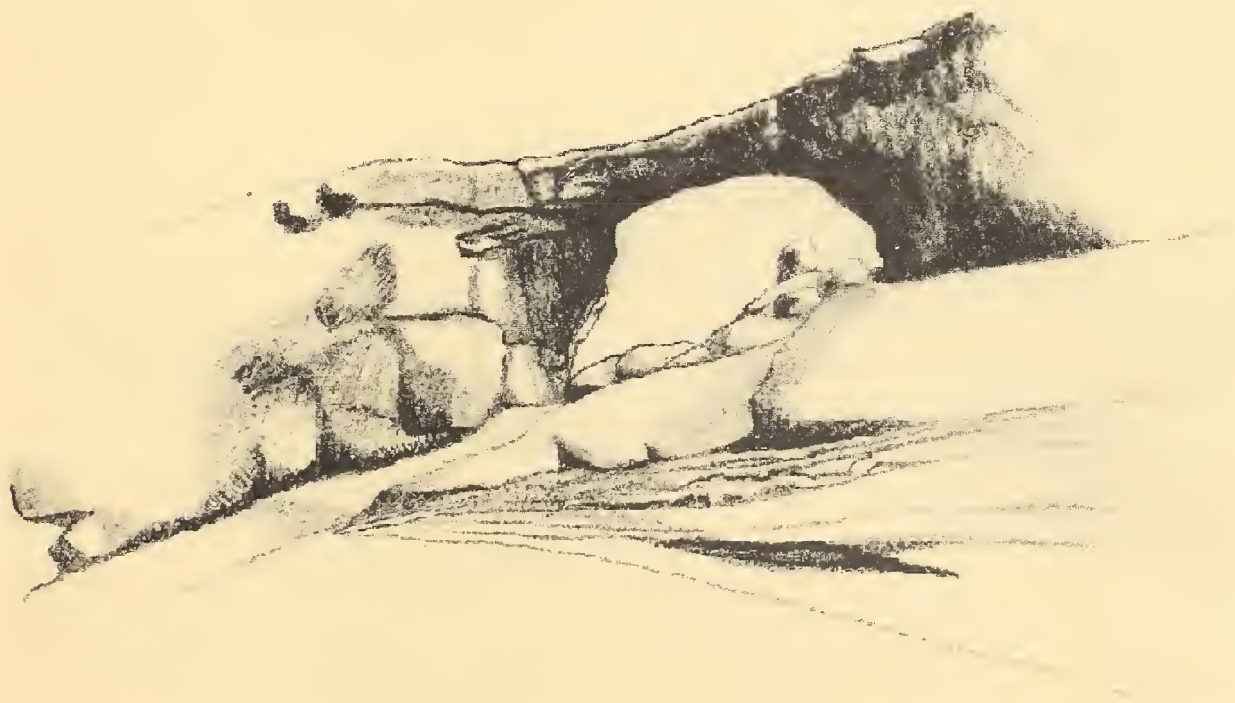


# Natural Bridges National Monument

U T A H

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Final Environmental Impact Statement  
General Management Plan  
Development Concept Plan



**United States  
Department of  
Agriculture**



**National Agricultural Library**



February 1997

**FINAL ENVIRONMENTAL IMPACT STATEMENT**  
**GENERAL MANAGEMENT PLAN / DEVELOPMENT CONCEPT PLAN**  
**for**  
***NATURAL BRIDGES NATIONAL MONUMENT***

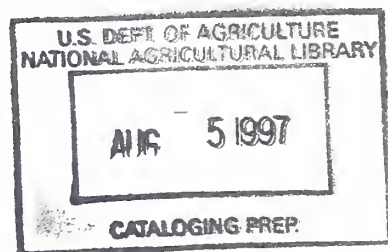
Prepared by  
NATURAL BRIDGES NATIONAL MONUMENT

Box 1  
Lake Powell, Utah 84533-0101  
801-692-1234

with assistance from

Planning Group, Rocky Mountain Support Office  
Intermountain Field Area  
National Park Service  
12795 West Alameda Parkway  
P.O. Box 25287  
Denver, Colorado 80225-0287

***NATIONAL PARK SERVICE - U.S. DEPARTMENT OF THE INTERIOR***





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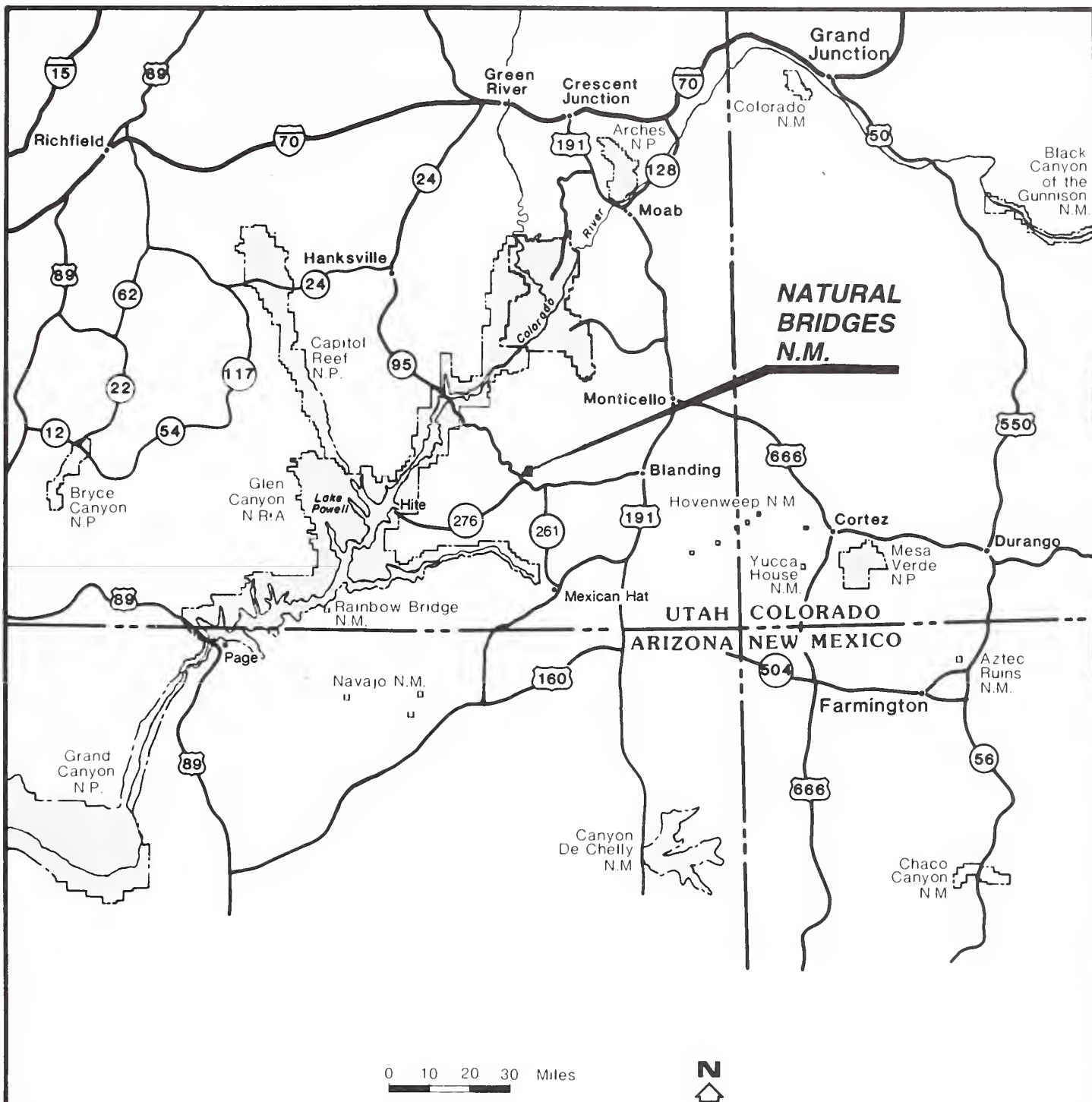
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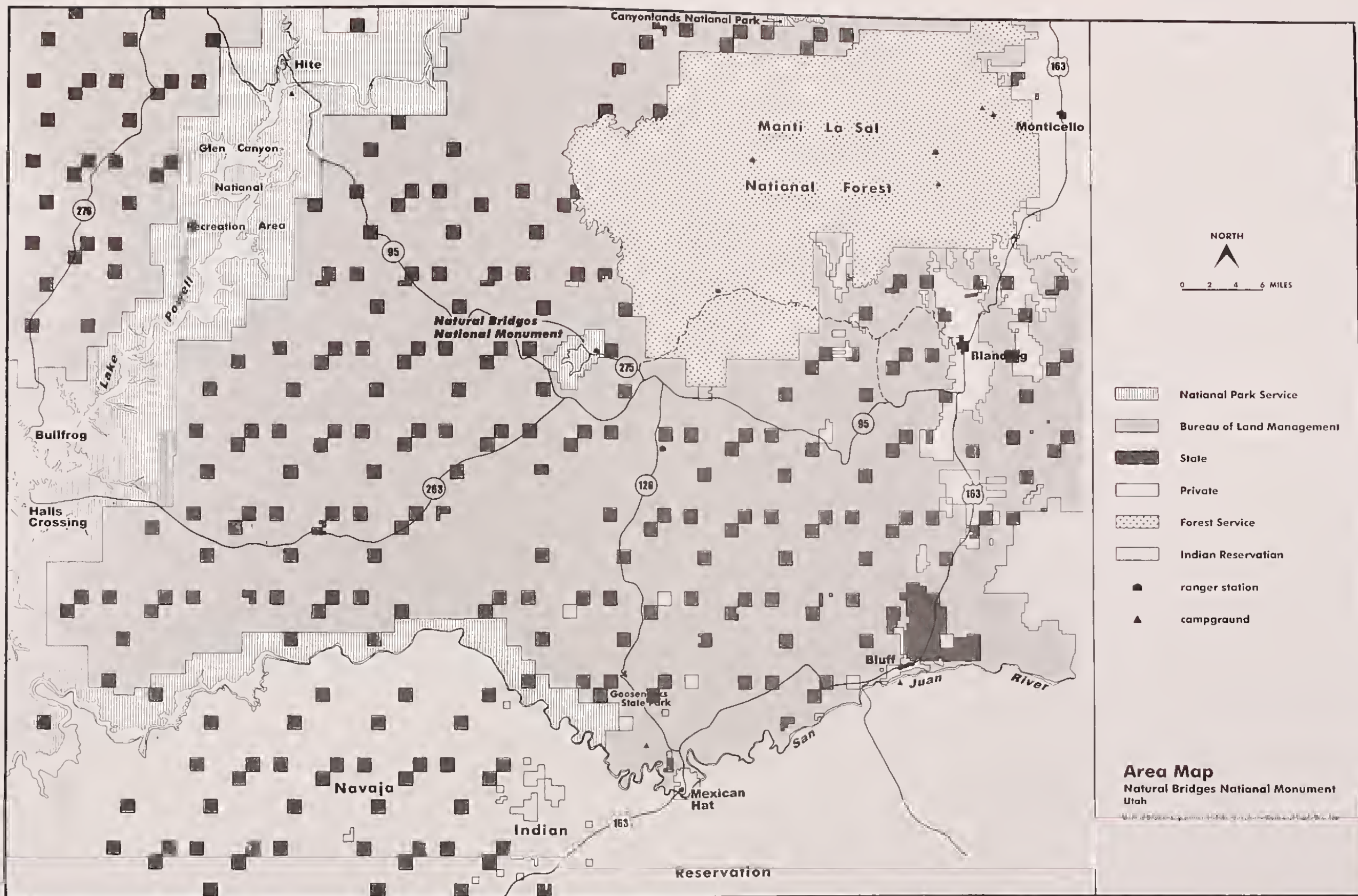
## Vicinity Map

### Natural Bridges National Monument

United States Department of the Interior - National Park Service











## PREFACE

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The National Park Service, through the combined efforts of a team made up of staff from Natural Bridges National Monument, the Southeast Utah Group, the former Rocky Mountain Regional Office, and the Denver Service Center, prepared this comprehensive General Management Plan to address the future management of the park. The effort was accomplished in cooperation with the U.S. Forest Service (USFS), the Bureau of Land Management (BLM), and the State of Utah. Two alternatives—one for no action, and the other, a proposal—have been considered to direct the management and development of Natural Bridges National Monument for a period of about 10 years. Also presented are alternatives that were considered but

rejected. The proposal includes expansion of the administrative/visitor center to provide an additional 900 to 1,400 square feet of office and sales space; the removal and rehabilitation of a small picnic area; the addition of a comfort station and benches for visitor comfort along the loop road; the addition of housing for 12 future employees; re-design of the visitor center parking area to improve vehicular circulation; and the addition of a garage and storage building in the maintenance area. The environmental consequences of the no-action alternative and proposal alternative are presented herein. Also included are the results of the public involvement and consultation/coordination for this project.



## SUMMARY

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In developing this Final Environmental Impact Statement/General Management Plan/Development Concept Plan (FEIS/GMP/DCP) for Natural Bridges National Monument, several issues have been identified that require resolution. The issues involve: finding a balance between protection of the resources and provision of opportunities for visitor use; inadequate facilities at the visitor center; insufficient number of campsites in the area; protection of viewsheds; wilderness suitability; determination of wild river status for the section of White Canyon that is within the park; access to facilities for persons with disabilities; and limited in-park staff housing.

Two alternatives—no-action and a proposal—have been analyzed. Alternatives that were considered but rejected are also presented. The plan is intended to have a life of 10 to 15 years.

Under the no-action alternative, existing management activities would continue, and management zoning and resource management plans would be implemented as funding allowed. Existing visitor facilities would be maintained to support current activities; roads would continue to be repaired as needed; and required improvements for safety, sanitation, and accessibility for persons with disabilities would be accomplished as funding permitted.

The proposal alternative would provide an additional 900 to 1,400 square feet of office space at the administrative/visitor center, and, upgrade visitor orientation information and facilities, as guided by the park's Plan for Interpre-

tation (appended). The small picnic area on Bridge View Drive would be removed and the area rehabilitated, and a comfort station and benches for visitor comfort would be located along the drive. Construction and replacement of housing for up to 12 employees is planned over the next 10 to 15 years. The visitor center parking area would be re-designed to improve vehicular circulation, and a garage and storage space would be added to the maintenance area to improve operations.

The proposal emphasizes coordination and cooperation with other land management agencies, especially the Bureau of Land Management (BLM), in terms of sharing facilities and providing services. For example, the proposed future housing at Natural Bridges includes a small number of BLM employees.

Under the no-action alternative, a minor disturbance to soil and vegetation adjacent to the picnic area, roads, parking lots, camping areas, and buildings would continue. With increased visitation, undirected foot traffic would trample additional soil and vegetation adjacent to parking lots and trails; motor vehicle emissions would increase; and water resources could be diminished.

The proposal alternative would generally improve visitor orientation and enjoyment of the park. However, construction of, or alteration to, facilities (as called for in the proposal) would result in the permanent removal of vegetation and topsoil, changes in site topography, and introduction of impermeable surfaces such as com-

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pacted dirt and gravel. Changes in native plant species and vegetative growth and productivity could result from runoff diverted by these surfaces. No geologic features would be affected. Placement of underground utilities would temporarily disturb soil and vegetation; however, disturbed areas would be restored to a natural grade and seeded with native species, and non-native plants controlled. Some rodents and other small mammals would likely be displaced by construction, as would some smaller bird species, reptiles, and amphibians. Construction would result in a temporary increase of particulate matter and motor vehicle emissions.

Measures to mitigate visual intrusion, such as architectural compatibility with the natural setting and natural screening, would be employed. Wherever ground disturbance is necessary, appropriate archeological data recovery and mitigation procedures would be followed. Museum collections could increase as a result of data collection and mitigation of archeological sites disturbed by proposed construction activities.

Neither alternative would have any effect on agricultural lands, water rights, flood-plains, wetlands, threatened and endangered species, or known ethnographic resources.

# PURPOSE OF AND NEED FOR THE PLAN

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A General Management Plan for Natural Bridges National Monument (hereafter also referred to as “the park”) is needed to fulfill management objectives and to guide management, use, and development for the next 10 to 15 years. The primary objectives of the plan are to protect and preserve the natural and cultural environments; to permit biological, geological, and other natural processes to continue with a minimum of human disturbance; and to provide opportunities for enjoyable visitor experiences while instilling an understanding of the significance of park resources.

## **DESCRIPTION OF THE PARK**

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Natural Bridges National Monument is 43 miles west of Blanding, San Juan County, Utah, in the Third Congressional District of Utah. The park contains 7,435.49 acres within its boundaries. Additionally, 201.39 acres of BLM land have been withdrawn from availability for other purposes to create a scenic entrance to the park.

San Juan County covers 7,884 square miles, and is the largest county in Utah. This county makes up the southeast corner of Utah, and is roughly equivalent to the size of the State of Massachusetts. The county lies entirely within the physiographic region of the United States known as the Colorado Plateau. The land area surrounding the park ranges from the desert canyons along the Colorado River to the forested mountains of the Abajo Mountain Range. Elevations on the Colorado Plateau vary from approximately 4,200 to about 10,000 feet.

As is common in the Southwestern United States, precipitation is minimal, averaging only 13 inches per year.

## **PARK PURPOSE, SIGNIFICANCE, AND MANAGEMENT OBJECTIVES**

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### *Introduction*

In the fall of 1994, a 2½-day workshop was sponsored by Natural Bridges National Monument to reaffirm its role and purpose as a unit of the National Park System. The workshop resulted in statements of: the park’s purpose, the significance of its resources, and its management objectives. Workshop participants included Natural Bridges National Monument staff, former Rocky Mountain Regional Office staff, Southeast Utah Group members, Hovenweep National Monument staff, and stakeholders from the surrounding communities and federal agencies. The park’s purpose and the significance of its resources are important because they are the basis for developing management objectives for making future management decisions. The alternatives developed in the General Management Plan will be based on the park’s purpose and significance and relate to achieve one or more of the management objectives.

The park—Utah’s oldest national park area—was established on April 16, 1908, by Presidential Proclamation Number 804, 35 Statute 2183. This act states:

“Whereas, a number of natural bridges situated in southeastern Utah, having heights more lofty and spans far



greater than any heretofore known to exist, are of greatest scientific interest, and it appears that the public interests would be promoted by reserving these extraordinary examples of stream erosion with as much land as may be necessary for the proper protection thereof ....”

Proclamation Number 881, 36 Statute 2502, September 25, 1909, enlarged the boundaries of the park, stating in part:

“Whereas, at the time this monument was created nothing was known of the location and character of the prehistoric ruins in the vicinity of the bridges, nor of the location of the bridges and the prehistoric cave springs, also hereby reserved ... I, William H. Taft, President of the United States of America ... do hereby set aside as the Natural Bridges National Monument ... about two thousand four hundred and twenty acres, and embracing said natural bridges and principal prehistoric ruins ....”

Proclamation Number 3486, August 24, 1962, 76 Statute 1495, enlarged Natural Bridges again, stating in part:

“Whereas it appears that it would be in the public interest to add to such monument approximately five thousand two hundred and thirty-six acres of land near the present boundaries which contain additional cliff-type prehistoric Indian ruins and suitable space for construction of a visitor center, administrative offices, employee residences, utility and maintenance facilities, and a new entrance road ....”

### **Purpose**

The purpose statements below reflect the reasons for which Natural Bridges National Monument was set aside as part of the National Park System. Pur-

pose statements are based upon the above-referenced legislation, legislative history, and historic trends. Therefore, the purpose of Natural Bridges National Monument is to preserve, protect, and provide for present and future generations the following:

- The three natural bridges and other natural resources in their natural setting; and
- Prehistoric Indian ruins and other cultural resources.
- Scenic and wilderness value; and
- Opportunities to experience, understand, and enjoy Natural Bridges National Monument.

### **Significance**

Significance is summarized in statements that capture the essence of Natural Bridges National Monument's importance to our natural and cultural heritage. Significance statements are not an inventory of significant resources, but rather describe the importance or distinctiveness of the aggregate of resources in the park.

As stated in the enabling legislation, the park is typified by several natural stone bridges “... having heights more lofty and spans far greater than any heretofore known to exist ....” this area was thought unique enough to be set aside as Utah's first national monument.

Natural Bridges National Monument contains outstanding examples of geological and erosional processes for public education, understanding, enjoyment, and scientific knowledge.

Natural Bridges preserves one of a few locations of kachina daisy plant colonies. This plant is very rare, and is

being considered for listing as endangered or threatened.

Natural Bridges contains an outstanding example of an ephemeral desert stream, ecological process, and biological diversity found in few other places. The park also contains cultural resources that have been preserved for decades, providing a scientific baseline for future learning.

Natural Bridges is an important part of an outstanding canyon system and viewshed.

Natural Bridges provides outstanding opportunities for visitors to experience and discover the natural and cultural heritage of southeastern Utah, and serves as a focus, or anchor, for tourism in this area.

Natural Bridges provides the opportunity to interpret and understand unique geologic and cultural resources, and their interrelationships, found in few, if any, other places.

Natural Bridges is the only site in a very remote area that provides any services.

The park provides an opportunity, found in few other places, to study the interaction among indigenous cultural groups.

The park protects and preserves numerous sites with religious and historic significance to American Indians.

### ***Management Objectives***

Management objectives are broad conceptual descriptions of what Natural Bridges *could* be like, based on resource conditions and the visitor experience park managers wish to provide. They describe desired ends, not specific solutions or means of accomplishing those ends. The objectives

for Natural Bridges National Monument address four general areas of management concern: resources management, visitor services, human resources, and partnerships.

### ***RESOURCES MANAGEMENT:***

- Natural Bridges is an active participant in developing new, and utilizing existing, effective programs for research, inventory, monitoring, interpretation, and preservation of the natural, cultural, and social resources.
- Natural Bridges sets an example in energy and resource-efficient operations.
- Realistic and cost-effective goals are set for management of exotic species in an ecologically sound manner.

### ***VISITOR SERVICES:***

- Any additions/changes to the landscape preserve its significant qualities and maintain the remote and rustic flavor.
- Natural Bridges has an outstanding interpretive program that provides visitors with an understanding of the cultural and natural resources preserved in the park.
- Natural Bridges has in place appropriate, necessary, and safe visitor facilities, access, and services.

### ***HUMAN RESOURCES:***

- Appropriate facilities exist to provide a safe, efficient, and comfortable working and living environment.
- The park is fully staffed by a well-trained, motivated, diverse, and professional work force that has authority, responsibility, trust, and sufficient resources to accomplish its responsibilities.

### ***PARTNERSHIPS:***

- All federal, state, and local agencies work in concert to: use a regional approach to planning, share human and other resources, provide visitor services, provide resource protection and management, and share facilities and infrastructure, when and where possible.
- In order to better protect park resources, provide for visitor enjoyment, and

contribute to the well-being of the local area, Natural Bridges is a full partner in the social and economic life of the local community.

- Natural Bridges has strong and effective relationships with associated American Indian Tribes.

### LEGISLATIVE AND ADMINISTRATIVE CONSTRAINTS

The Antiquities Act of 1906 authorizes the President of the United States to reserve as national monuments areas containing historic and prehistoric structures, and other objects of historic and scientific interest. In 1916, the National Park Service's Organic Act further charged the National Park Service to conserve "the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

In addition to complying with provisions of the aforementioned acts, the park must also comply with all other applicable federal and state statutes and regulations. Consideration must be given to the protection of historic objects and archeological resources (National Historic Preservation Act and Archeological Resources Protection Act), floodplains and wetlands (Executive Orders 11988 and 11990), air and water quality (Clean Air Act and Federal Water Pollution Control Act), and threatened or endangered species (Endangered Species Act).

Pertinent legislation affecting the park with regard to adjusted boundaries to provide better administration and protection of resources includes:

- Proclamation Number 804, 35 Statute 2183, April 16, 1908, established Natural Bridges National Monument.
- Proclamation Number 881, 36 Statute 2502, September 25, 1909, enlarged the boundaries.
- Proclamation Number 3486, August 24, 1962, 76 Statute 1495, enlarged the boundaries again.

Binding Agreements with other federal agencies, or the State of Utah include:

- A 1-mile highway right-of-way allowing Utah 95 to cross the southwest corner of the park.
- A right-of-way permit from the Bureau of Land Management for an access road across public land to a National Park Service water well.
- Public Land Order 3352 (U-0118454), withdrawing land for the entrance road, with Bureau of Land Management, for those lands leading from Utah 95 to the park's boundary. This withdrawal gives the National Park Service some administrative authority (200 feet on each side of the road's center line) over those lands.
- The National Park Service also has a right-of-way (200 feet on each side of the road's center line) from the state along the entrance road where it crosses a state section of land (Section 32); Utah State Withdrawal Number 856.
- Cooperative agreement between the State of Utah and the Regional Director, Rocky Mountain Region, National Park Service, to jointly identify, communicate, and coordinate actions of common concern relating to the management of State-administered and National Park Service-administered lands and resources, and provide a mechanism for continuing involvement in the development and revision of General Management Plans.
- Cooperative agreement with the Bureau of Land Management for exchange of radio frequencies.
- Memorandum of agreement between the Bureau of Land Management and the National Park Service for a telecommunication site located on Bureau of Land Management lands.



- Interagency Fire Coordination Plan, signed on May 23, 1984, between Bureau of Land Management, U.S. Forest Service, and National Park Service. This plan establishes procedures for wildland fire reporting, fighting, and administration procedures.
- Cooperative agreement with Bureau of Land Management for the maintenance of a drift fence along the eastern boundary of Natural Bridges National Monument.
- Interagency agreement between the National Park Service, U.S. Fish and Wildlife Service, and Federal Aviation Administration to reduce the number of low-flying-aircraft incidents.
- Canyonlands Natural History Association (CNHA) holds a concession permit for sales of visitor convenience items, such as film.

## ISSUES AND CONCERNS

The scoping process for the Natural Bridges National Monument General Management Plan consisted of issuance of a brochure and a news release requesting input on issues of visitor use, development needs, and resource protection. A notice of intent to prepare the Environmental Impact Statement was published in the *Federal Register* on March 22, 1991.

Comments were solicited from various federal, state, and local agencies, public-interest groups, local communities, American Indian tribes, and the public, in order to provide these groups with the opportunity to identify major concerns and issues that should be addressed in the Environmental Impact Statement. Issues listed here were identified during the scoping process.

### **Resources Management and Land Protection**

The park is surrounded by Bureau of Land Management, U.S. Forest Service, and state- and privately-owned

lands. Many different uses and management activities are allowed on these lands, and because natural systems know no legislative boundaries, actions taken outside the park have the potential to negatively impact the natural and cultural resources inside the park. In addition, many of these lands are visible from within the park. The National Park Service considers viewsheds to be a valuable resource, and is concerned about protecting them from negative impacts. Because the NPS is concerned about maintaining a healthy natural system, in and outside of park boundaries, the National Park Service will analyze, in addition to the adequacy of the existing park boundary, what strategies may be feasible or necessary to protect the resources.

The Bureau of Land Management is the largest land-owner adjacent to the park. BLM land is managed for multiple purposes, seeking the best-considered, balanced solutions to satisfying the many demands, which include grazing, recreation, and maintenance of scenery. Existing planning documents of the San Juan Resource Area of the BLM allow for vegetation treatments near the park to improve range and wildlife habitats, and a Woodland Management Plan is in preparation that could allow significant removal of trees for fuel wood in some areas. These potential land treatments in the Natural Bridges area are of particular concern to the National Park Service in its more restrictive but equally valid mission. Some portions of the potential treatment area are visible from the park's trails, roads, and overlooks. These visible areas have been determined through a combination of computer analysis of viewsheds and ground-truthing. An appended

Frequency-Viewshed Analysis map shows what areas are visible from major overlooks and road sections, and along the entrance corridor.

To manage the park's natural and cultural resources as a whole, the park needs to address ways to protect the park's and surrounding area's natural and cultural resources. The following are more detailed park resource-related issues that need to be addressed.

#### *VEGETATION MANAGEMENT:*

Visitor use can also affect the condition of resources in the park. Visitors not using designated trails or walks at overlooks and pullouts have damaged sensitive cryptogamic soils and vegetation. However, the amount of this damage has never been monitored to determine the effects on the natural environment and subsequent management strategies for protecting it.

Cattle that trespass onto the park to graze are a threat to vegetation through direct consumption, trampling, and creation of a seed bed for exotics.

Tamarisk, an exotic species, is found within the park, and threatens native riparian plant communities. Healthy piñon-juniper and riparian ecosystems are necessary for the plants and animals of Natural Bridges to survive. The park does not have an adequate ecosystem information base upon which to base management decisions about maintaining these ecosystems.

#### *WILDLIFE:*

The park's data base on the presence of species, species interactions, ecosystem processes, community structure, and knowledge of critical habitat requirements for wildlife species is not well established. Human impacts to the park's ecosystem and its wildlife

are not known because of the lack of this data base.

#### *THREATENED, ENDANGERED, AND SENSITIVE SPECIES:*

Information regarding the status of threatened and endangered species found in the park is incomplete. The kachina daisy is the only sensitive species that is adequately monitored at present.

#### *WILDERNESS:*

Lands within the park have not been analyzed as to their suitability for designation as wilderness.

#### *FIRE MANAGEMENT:*

The predominant vegetation type in the park is the piñon-juniper community—a fire-tolerant vegetation type. The area has characteristics that make fire unlikely to spread over most of the park. However, human activity, especially in concentrated use areas like the campground and residential area, increases the potential for man-caused fire.

#### *QUATERNARY RESOURCES:*

An extensive, thorough quaternary resource inventory and documentation have not occurred in the park. Past archeological surveys have focused on the human occupation of the Cedar Mesa/Natural Bridges area; some of them have produced information on, or indications of, paleontological resources in the park. Important information on past regional climates, flora, and fauna could be recovered from paleontological studies.

#### *CULTURAL RESOURCES:*

Archeological resources are one of the two primary purposes of the park, yet most surveys conducted to date were

either performed early in the century and are unsystematic or have been limited to past construction activities and cover only a fraction of the park's total land area. Future management actions could disturb archeological resources, and illegal collecting could disrupt the integrity of sites. Comprehensive management strategies cannot be effectively prescribed without a thorough knowledge of the park's cultural resources.

Increasing visitation to the park and more intense use of the backcountry have led to a greater incidence in the vandalism of rock art sites, disturbance of hidden remains, and destruction of walls in ruin sites. Part of this impact is inadvertent, and stems from visitors not knowing the etiquette to observe when visiting archeological sites.

Historic and current uses of the park by American Indians, including such groups as the Ute, Navajo, and Hopi, are not well understood or documented.

### ***Visitor Use and Development***

#### ***VISITOR EXPERIENCE:***

Use at the park is primarily drive-through day use. Most visitors coming to Natural Bridges National Monument are passing through; their visit to the park is not their major objective, but it is one stop along the way. Because of the lack of any facilities in this part of the Cedar Mesa plateau and Elk Ridge (an area of over 4 million acres), Natural Bridges has become a popular place for finding cool, refreshing water; rest-rooms; and overnight camping.

Bridge View Drive—a one-way loop road—runs along the edge of the mesa, and provides visitors with the opportunity to view the three bridges

and surrounding canyon landscape from the numerous overlook points. This is the easiest, quickest way to see the park. Approximately 97 percent of visitors travel the loop road. Nearly 100 percent of the travelers who come through the entrance gate stop at the visitor center. Once they arrive at the park, they utilize the information, view the interpretive exhibits, and use the rest-rooms. In addition to driving the loop road, visitors can participate in interpretive programs, including programs at the amphitheater near the campground. The programs at the amphitheater are very popular for those staying overnight in the campground. The average length of a stay in the park is 2¼-hours.

Driving the loop road is not the only way to experience the park. There are numerous hiking trails along the mesa, and down into the canyons to the bridges. Hiking in the park can be a most rewarding experience, because it is possible to get down into the canyon and get up close to and under the bridges. However, only 17 to 18 percent of visitors actually hike the trails down into the canyon to get a closer look at the bridges. Visitors who hike into the canyon tend to stay in the park from 3 to 6 hours. There is no overnight camping in the canyons.

Bicycling the access road is also a rewarding way to tour the park; however, this, too, is done by only a small percentage of visitors. Currently, no significant commercial use occurs. The use of stock and pack animals by commercial or other users is not allowed anywhere within the park.

Although overnight facilities in the park are limited to 13 campsites, visitors can spend the night in the park and enjoy camping, an evening interpretive



program, or an evening hike. The Natural Bridges campground is the only developed campground for 40 to 50 miles in any direction, and the demand for camping is much greater than the supply. Many of those looking for a campsite are not even visitors to the park, but rather are traveling through the area and need a place to stop for the night. This has resulted in an overflow of camping for several miles around the park. In such areas, the occurrence of informal fire rings, off-road use, and problems with trash and human waste disposal are present.

With this in mind, the National Park Service, as the steward of this resource, must ask itself if these are the most appropriate experiences for visitors to have in the park. Are current uses and programs providing visitors with a fulfilling experience of the park's resources? Is Natural Bridges truly a drive-through park—or are our visitors missing a critical experience because other facilities are not provided? Is the current design of camping—camping within feet of your neighbor—the kind of camping experience the NPS should be offering? Is a randomly scattered assortment of overflow campers and their impacts an appropriate use of Bureau of Land Management lands, and one the NPS should be fostering? Based on the purpose of the park, the significance of its resources, and the ability of the natural and cultural resources to accommodate use, an analysis of appropriate uses and methods of providing opportunities for visitors to experience the wonders of Natural Bridges, and necessary support facilities, is needed.

#### *INFORMATION/INTERPRETATION:*

Basic park orientation information is available at the visitor center. However, the format and presentation of available information are not very engaging, and there is concern that because of this, visitors may not be taking the time to read the information and may not be receiving important safety information regarding lightning, flooding, or wildlife hazards.

The park's 1978 interpretive plan focuses narrowly on the story of the formation of the three natural bridges. Human and natural history themes are addressed in a cursory and disconnected manner. Park managers believe that this program falls short in telling the broader, comprehensive story of both the geologic and human history of the park.

The media used in presenting the interpretive information in the visitor center are ineffective for telling a compelling, all-inclusive story. The book sales area, which sells interpretive and historical books about the park, is in an area originally planned as part of the lobby. This has created a point of congestion within the visitor center. The exhibit room contains a mix of 1960s-vintage and home-made exhibits, which do not tell coherent, complete, and interesting stories, or compel visitors to spend much time looking at them. The sound/slide program in the auditorium is very poor, both in content and image quality. The arrangement of the screen in relation to the seating is such that visitors seated in any row other than the first cannot see the entire image, thus causing them to miss out on part of the interpretive experience. The room is also too small to accommodate the high-volume use that accompanies bus

travel, which is increasing at the park. Because of low staff levels and the location of the auditorium entrance within the visitor center, programs are shown in the auditorium only during the day—but visitors are in the park during the evening as well.

The amphitheater near the campground is another form of interpretive media. It is used for evening programs. It is equipped with a home-made wooden screen that has become weather-beaten and unattractive. The projection booth is also weathered, and does not adequately protect audiovisual equipment from dust, sand, and heat. Split-log benches seat approximately 30 people. Frequently, people camping outside the park boundary drive into the park to attend programs. These people, in addition to those staying in the campground, sometimes exceed the capacity of the amphitheater, and there is no designated parking at the trail-head. Some persons with disabilities cannot reach the amphitheater because the path is not designed for other than foot traffic. Visitors are not receiving a high-quality program because of the poor condition of the facility.

The interpretive program (detailed in the appended Plan for Interpretation) is analyzed to determine the adequacy of both its scope and the media used to portray the park's significant resources and history.

#### *ACCESS/CIRCULATION:*

Access into the park is from Utah 275. This road is on Bureau of Land Management land, but a 400-foot-wide corridor from Utah 95 to the park boundary (about 4 miles) has been withdrawn, by the BLM, from availability for other purposes, and is reserved to

serve as a scenic entrance road to Natural Bridges National Monument. This has created management difficulties for both agencies in terms of maintenance, patrol, and use. Alternatives for managing and protecting the natural and visual resources throughout this corridor need to be addressed.

#### *VISITOR SERVICES/FACILITIES:*

The design of many of the visitor service facilities does not serve the needs of today's visitors. This results in impacts to the natural resources, and decreases the quality of visitors' experiences while in the park. The adequacy of many of these facilities needs to be analyzed.

The design and layout of the campground are not conducive to accommodating larger vehicles commonly used for camping today; and sites are in close proximity to each other, with little room for privacy. The design of the campground is basically a loop road. It is one lane wide, but for half its length it is used as a two-lane road.

Each site is equipped with a grill, a picnic table, and a tent pad. However, the tent pads are far too small for today's large tents. There are two comfort stations (one of which is accessible to persons with disabilities) in good condition within the campground, and bulletin board and self-pay fee-collection stations are near the entrance.

Many park visitors also picnic in the park—a few at the small picnic area midway around the loop road. Due to its location, the existing picnic area is seldom used; and due to drainage issues, it is a resource problem. Most visitors simply park at the overlooks and sit on the side of the parking area,



or use picnic tables on the patio outside of the visitor center. The appropriateness of this picnicking activity and locations where it should take place need to be addressed.

None of the paved paths from the parking areas to the three bridge overlooks meet the American Disabilities Act standards for accessibility.

Vehicular circulation at the visitor center parking lot is difficult for large recreational vehicles and buses because of the layout of parking spaces for large vehicles. This results in frustrated visitors and jams in the parking lot. Alternative parking designs need to be analyzed.

### ***Human Resources and Park Operations***

#### ***HOUSING:***

Because of the distance of the park from the nearest established community (43 miles) and any alternative housing, most park employees would prefer to live at the park. Many of the seasonal employees simply cannot find affordable housing outside of the park. However, the existing number of housing units for park employees does not accommodate all employees without many of them having to share space. There are three single-family homes, two substandard modular units, and a three-unit seasonal apartment building available for park employees. In addition, there is a mobile trailer unit, parked in the maintenance area, for short-term occupancy (a few days to a couple weeks) by construction crews or Southeast Utah Group (SEUG) group visitors.

Last year, the park employed seven permanent and 13 seasonal staff. This number and ratio of permanent employees to seasonal employees have

been relatively constant over the last few years. All but one of the employees lived in the park. The housing situation for these 20 employees was handled by voluntarily or involuntarily crowding people together, including having unrelated employees sharing bedrooms and bathrooms and sleeping in each other's living rooms; having them camp; and not hiring or accepting needed employees or volunteers. Two of the permanent employees currently occupy a one-bedroom apartment each; and one permanent employee occupies an efficiency apartment rather than single-family housing, in order to "free-up" a single family home for seasonal employees. However, the apartment building was not originally designed to be used throughout the year, and does not meet living standards for permanent employee housing. A third permanent employee lives in Monticello, 65 miles away. It was his preference to make the daily commute. The three remaining permanent employees live in the three single-family homes. The two three-bedroom modular units and the single-wide mobile home accommodated a total of 11 seasonal employees; and two additional employees were housed in a temporary travel trailer, which was never meant for more than very short-term occupancy. At the most, these units should have accommodated no more than nine seasonal employees (one per bedroom, assuming there are no spouses). These cramped and crowded living situations cause serious morale problems among park employees.

The appropriate number of employees that should be housed in the park, based on the existing housing stock, should be three permanent employees

in the single-family homes; and 12 seasonal employees in the apartments, two modular units, and single-wide mobile home. However, the modular units and mobile home are substandard living units, and should be replaced.

In addition, the Bureau of Land Management has a small number of employees stationed at Kane Gulch, about 9 miles southeast of the park. They live in trailers, and the utility systems are temporary: water is hauled in, propane tanks are used for heat, and waste is handled by a small septic leach-field system. BLM has plans to increase the staffing level and visitor services at Kane Gulch, and has expressed an interest in accommodating most of the housing needs associated with this increase in staff and services within Natural Bridges in order to be more efficient in utility development and use. The appropriateness and feasibility of providing housing and other services at the park for other federal agencies need to be analyzed.

Because of the park's small size, fragile natural environment, and limited utilities, the necessity for and feasibility of providing employee housing at the park need to be evaluated.

#### **ADMINISTRATION:**

The administrative offices are presently connected to the visitor center. In an area of about 770 square feet, there are four permanent and up to four seasonal employees trying to work productively while sharing desks. In an area where most employees work and live together and see each

other 7 days a week, these cramped and crowded conditions are believed to reduce employee productivity and morale and lead to increased friction and conflict. Alternatives for providing adequate work spaces for employees need to be analyzed.

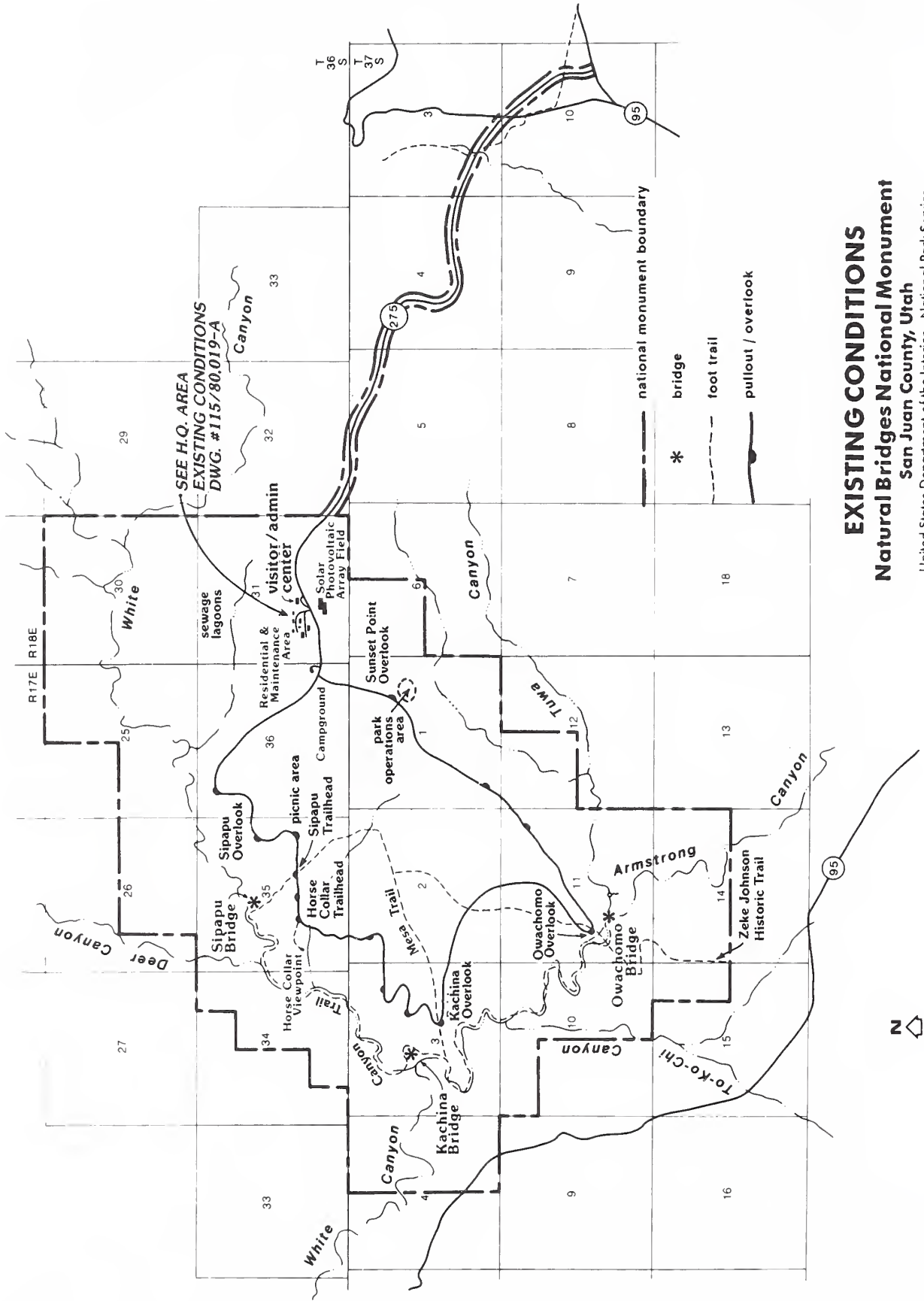
#### **MAINTENANCE:**

Space for vehicle and general storage in the maintenance area does not accommodate present needs. This has resulted in vehicles and equipment being stored and/or worked on outside, sometimes in extreme weather



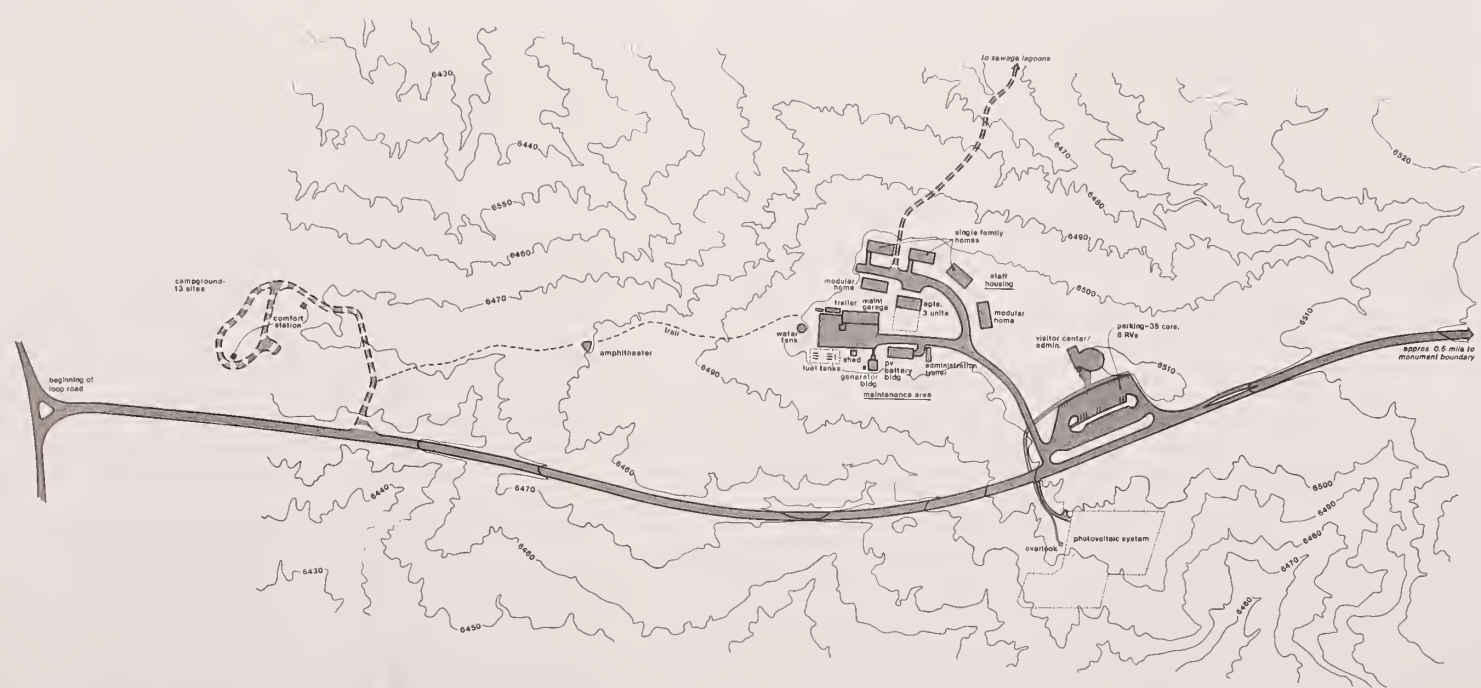
*visitor center*

conditions—which is not good for either the equipment or maintenance employees. Alternatives for maintaining vehicles and providing adequate storage need to be analyzed.



**EXISTING CONDITIONS**  
**Natural Bridges National Monument**  
 San Juan County, Utah  
 United States Department of the Interior - National Park Service







# THE ALTERNATIVES

## INTRODUCTION

Two alternatives are presented here: a no-action alternative; and a proposal, which is considered the General Management Plan for Natural Bridges National Monument. The alternatives would provide for varying levels of visitor use, park operations, and health and safety standards, and describe the National Park Service philosophy for managing the park's natural and cultural resources. Also presented here are alternatives that were considered but rejected.

## ALTERNATIVE A: NO-ACTION

Under the no-action alternative, existing management activities would continue. Existing visitor facilities would be maintained to support current activities. Required improvements to safety, sanitation, and accessibility for persons with disabilities would be accomplished as funding permitted. Routine maintenance would continue.

### *Resources Management and Land Protection*

Natural Bridges National Monument would continue to be managed as a natural area, with primary emphasis on the geological and archeological resources. An existing Resource Management Plan, which prescribes specific proposals for action to facilitate the long-term protection of the park's resources, would be implemented as funds become available. Under the no-action alternative, park boundaries would remain unchanged, but, park managers would continue to coordinate planning and proposed actions

with other land-owners and management agencies—especially the Bureau of Land Management.

### *Visitor Use and Development*

#### *VISITOR EXPERIENCE/USE:*

Under the no-action alternative, the park would continue to be primarily a drive-through, day-use park, with a limited amount of overnight use. Recreational activities include sightseeing (vehicle touring) from Bridge View Drive, hiking on the mesa and in the canyons, attending interpretive programs, viewing exhibits in the visitor center, picnicking, camping in the designated campground, and bicycling on park roads.

#### *INFORMATION/INTERPRETATION/FACILITIES:*

Under the no-action alternative, information and most of the interpretive facilities would remain in the visitor center. The amphitheater will remain as an interpretive facility for outdoor and evening programs.

#### *ACCESS/CIRCULATION:*

Access into the park would continue to be off of Utah 95, via Utah 275. The one-way, 9-mile Bridge View Drive would continue to be the only road through the park.

#### *VISITOR SERVICES/FACILITIES:*

Existing visitor facilities would remain. These include the visitor center, campground, amphitheater, Bridge View Drive, picnic area at the visitor center, and numerous hiking trails.

The 2,100-square-foot visitor center includes a lobby area/information desk, auditorium, exhibit area, book sales area, and rest-room facility. Parking for 35 autos and eight recreational vehicles (RVs) and/or buses (including one for visitors with disabilities) is provided. This facility would remain as the major visitor contact point.

The 13-site campground would remain in its present condition and location. Sites are designated, and each has a picnic table, grill, and tent pad, but water is not provided.

Bridge View Drive is a one-lane, one-way, 9-mile-long paved loop road. There are eight pullouts, three of which are bridge overlooks/parking areas, and two that are trailhead/parking areas. For health and safety reasons, a comfort station would be installed at some location along the loop road. Under the no-action alternative, one or more overlook trails would be modified to meet ADA standards for wheelchair access.

Hiking trails, totaling 12.8 miles, exist in the park. The mesa trail runs primarily along the mesa on the "inside" of the loop road. A second trail travels through the canyon bottom and connects the three bridges. These trails are in good condition, and would remain.

### *Human Resources and Park Operations*

Under the no-action alternative, all existing housing, administrative, and maintenance facilities would remain.

#### *HOUSING:*

In the housing area, the three single-family homes and one apartment building (three units plus a laundry area) would remain. The single-wide mobile home and two three-bedroom modular residences would be replaced with permanent housing. Because of the distance to any other developed area, housing would continue to be used on an as-available basis for National Park Service group office personnel, other agency staff who may be temporarily working in the areas, construction crews, and visiting researchers.

#### *ADMINISTRATIVE FACILITY:*

The 770-square-foot administrative area, which includes three offices and a utility room attached to the northwest side of the visitor center, would remain.

Natural Bridges National Monument is managed as a unit of the Southeast Utah Group. The Southeast Utah Group includes the staff of Canyonlands National Park, Arches National Park, and Natural Bridges National Monument. The group provides management assistance and shares management resources among all three parks.

**Table 1: Existing Staffing Level**

POSITION	GRADE	FTE
<b>Division of Management and Administration</b>		
• Superintendent	GS 12	1.0
• Administrative Clerk	GS 05	1.0
<b>Division of Interpretation, Resource Management, and Visitor Protection</b>		
• Chief Ranger	GS 11	1.0
• Park Ranger (STF)	GS 09	0.9
• Park Rangers (seasonal)	GS 04/5	1.5
• Clerk/Fee Collection (part-time STF)	GS 04	0.7
<b>Division of Maintenance</b>		
• Chief of Maintenance	WS 07	1.0
• Maintenance Worker (STF)	WG 08	0.9
• Maintenance Worker (STF)	WG 05	0.9
• Maintenance Worker (seasonal)	WG 05	1.0
	<b>Total</b>	<b>10.1</b>

The 1994 fiscal year base operating budget for Natural Bridges National Monument was \$315,000.

#### **MAINTENANCE AREA:**

The existing 3,000-square-foot maintenance shop, which includes facilities for servicing National Park Service vehicles, storing maintenance equipment, and storing search and rescue equipment, would remain.

#### **UTILITIES:**

The park is more than 40 miles from any public utility grid, including electricity, telephone, and gas. Due to this remoteness, all utilities must be generated within the park and maintained by the NPS. The park's primary source of power is a photovoltaic (PV) system, with diesel-powered generators servicing as the backup power source. Heat is supplied by propane gas. All solid waste is hauled to municipal waste disposal sites at least 45

miles away. Water to the visitor center, residential area, and maintenance area is supplied through two 700-foot-deep wells. Water is pumped through a chlorination treatment system, and is stored in a 50,000-gallon reservoir. All sewage from the visitor center, maintenance area, and residential area is drained into an evaporative lagoon system north of the visitor center's developed area. A satellite television system supplying service to residents is maintained by park staff. Natural Bridges National Monument has regular telephone service in place of the former telephone service that was supplied by a very expensive microwave system. Under the no-action alternative, all these systems would remain.



## **ALTERNATIVE B: THE PROPOSAL**

### ***Resources Management and Land Protection***

#### **INTRODUCTION:**

Natural Bridges National Monument would continue to be managed as a natural area with emphasis on the geological and archeological resources. Natural Bridges National Monument is downstream from other public lands where a variety of public and private interests and objectives must be served—and where actions taken on these other lands can also negatively impact resources at Natural Bridges. On a broad scale, park managers have a responsibility to monitor conditions on surrounding lands, and to be proactive in working with other local land managers to encourage uses and land management practices that are compatible with the purposes of parks. National Park Service policies support cooperation to address external impacts, but do not endorse the creation of “buffer zones” where the NPS would attempt to exercise some direct control or veto authority over adjacent land uses. Although the NPS is authorized to recommend boundary changes during its planning, it may also cooperatively identify and recommend alternative means of maintaining environmental quality in the vicinity of parks. The authority to recommend boundary adjustments “...does not absolve agencies such as the NPS, BLM, and USFS from ultimately completing comprehensive surveys and determining the significance of all these resources.”

The superintendent of Natural Bridges National Monument will work with neighboring land managers toward the goal of resolving issues of mutual con-

cern. Cooperative planning will be undertaken to address adjacent land uses that influence park resources and the visitor experience, and management problems and issues of other adjacent land management agencies that the park may play a role in resolving. This will occur on an ongoing basis for individual projects in a way that is sensitive to cumulative effect. Early coordination on specific proposals and projects will ensure that various points of view are considered in formulating proposals, and that potential conflicts are identified and avoided or mitigated, if possible. Issues to be cooperatively addressed include:

- Direct or indirect effects of the specific selected methods of land treatment on the park's biota (e.g., chemicals, fire);
- Exotic plant species entering or increasing on park lands and in watercourses;
- Change in the park's wildlife species composition and population numbers related to alteration of the habitat outside the park, including threatened and endangered species and habitat;
- Change in the park's streambed hydrology caused by increase or decrease of water and/or sediment entering park watercourses;
- Change in groundwater hydrology related to rates of recharge of the Cedar Mesa sandstone aquifer, and its water quality, as could affect the park's domestic water supply or the natural springs and their associated plant communities;
- Change in the natural attributes of park lands including canyon, riparian, and aquatic resources, as could affect their suitability for wild river or wilderness classification;
- Change in the attributes of park lands including vehicle access, remote characteristics, natural silence, and night skies, as could affect their suitability for designation as wilderness;

- Potential for housing and other agency infrastructure needs to be accommodated within the park and for certain operation and maintenance needs to be cooperatively met; and
- Potential for some visitor service needs in the general area to be met outside the park.

Scenic quality is very important to the NPS. Much Bureau of Land Management and U.S. Forest Service land is highly visible from within the park. The BLM addressed scenic quality in their resource management plan for the San Juan resource area through Visual Resource Management classes (VRM). VRM provides their managers with guidance for maintaining varying degrees of scenic quality in balance with their other responsibilities (see BLM Visual Resource Management Zones map). Inasmuch as VRM classes for areas can be amended through the recognition of changing conditions and refinements in the BLM planning process, the National Park Service will encourage the highest practicable VRM class in areas where potential or proposed projects would affect views from the park. BLM and NPS managers in and around the park have established cooperative ties and protocols that generally develop consensus and/or require concurrence on issues that affect the other agency. The NPS will work with the BLM and other agencies to reduce visual impacts for park visitors and adverse effects on park resources, and will have input to the NEPA processes of these agencies to help clarify NPS environmental concern and achieve feasible compromise for overall public benefit.

Internally, to protect park resources from potential future damage and to maintain desired visitor experiences, a system similar to the U.S. Forest Service's Limits of Acceptable Change

(LAC) planning system and the National Parks and Conservation Association Visitor Impact Management (VIM) process would be developed and implemented at Natural Bridges. These processes emphasize the conditions desired in an area rather than an amount of use an area can tolerate. They require managers to define a desired condition and to undertake actions to achieve and maintain it. The process would include the following steps, and is referred to as a Visitor Experience and Resource Protection (VERP) program.

1. Specification of acceptable and desired resource and social conditions that reflect management objectives and the park purpose, by management zone;
2. Selection of specific key physical, social, or ecological impact indicators that become baselines for determining whether or not management objectives are being met (following steps);
3. Comparison of desired to existing conditions, using the established impact indicators to determine consistency with, or causes of discrepancies in, the desired resource and social conditions;
4. Identification and implementation of management actions necessary to achieve desired conditions; and
5. Monitoring and evaluation of management effectiveness to ensure that management objectives continue to be achieved over the long term.

This document will not attempt to determine a carrying capacity, or a specific number of people, that the park can accommodate. Rather, it empha-



sizes conditions desired to be maintained in the park. In response to these desired conditions, different management actions would be implemented to maintain the condition and prevent resource damage. The desired visitor experiences at Natural Bridges would vary between management zones, and reflect the uses determined appropriately for each. Step one has been completed as a part of this alternative. The remaining steps would be carried out by the park superintendent and staff, and an ongoing visitor use management program would be established at Natural Bridges National Monument.

Education is an important strategy that the park would continue to implement to help protect park resources. Improvement in the type, content, and distribution of information available to visitors, as described later in the Information/Interpretation section, is intended to contribute to a reduction in the impacts to natural and cultural resources.

A Geographic Information System (GIS) would be implemented as a method for storing and analyzing resource information for park management use.

The following are more detailed actions the park would take to protect resources. These are based on the park's Resource Management Plan.

#### *AIR QUALITY MONITORING:*

Air quality data collection and surveying of the biological effects of air pollution within Natural Bridges and the larger Colorado Plateau region are conducted at Canyonlands National Park. The park would continue to gather the necessary baseline information and monitor effects on re-

sources to make management decisions on protecting park air quality.

#### *WATER RESOURCES:*

At Natural Bridges National Monument, water resources would be subject to additional use, owing to proposals for additional park facilities to support increasing visitation. Surface water is of great importance for wildlife and the maintenance of the wetlands and hanging gardens within the park. Surface drainage can be affected by land management practices within and outside the park. It is therefore necessary to conduct a hydrologic assessment of the aquifer's capability to produce more water for visitor and park management use, and to determine any effects that increased usage would have on surface water systems.

White Canyon and Armstrong Canyon within the park are eligible for inclusion in the National Wild and Scenic River System. They have no impoundments or other modifications of their waterways. They have outstandingly remarkable scenic, geologic, cultural, and wildlife values that contribute to and sustain outstandingly remarkable recreational values. (See appended Wild and Scenic River Evaluation of Eligibility, Classification, and Suitability.) Inclusion in the National Wild and Scenic River System would be pursued.

#### *VEGETATION MANAGEMENT:*

To provide maximum protection for vegetal resources in the park, additional fences would be constructed along the park boundary or on Bureau of Land Management lands adjacent to the park to exclude cattle from other portions of the park. An environmental assessment to provide additional fencing will be prepared as a part of



the funding request to construct such facilities. The existing tamarisk management plan would be implemented, and a research program would be developed to determine the requirements for maintaining a healthy vegetal ecosystem.

#### *WILDLIFE MANAGEMENT*

Much of the documentation of wildlife at the park comes from wildlife sightings by employees and visitors. Although these sightings do not provide information about population sizes, and are not a true random sampling of wildlife species, they do provide a permanent record documenting the observation of many species. This informal documentation would continue. In addition, the park would pursue, with the BLM, USFS, and Utah Division of Wildlife Resources, ways to monitor the health and status of shared wildlife resources. The park would also develop a survey, documentation, and monitoring program that would use the information to determine management strategies for protecting wildlife and their habitats.

#### *THREATENED, ENDANGERED, AND SENSITIVE SPECIES:*

A survey, documentation, and monitoring system would be developed to identify the existence of threatened, endangered, or sensitive species within the park. This would include establishment of a data base of habitat requirements and population dynamics.

#### *WILDERNESS:*

A large portion of the park—5,340 acres, or 72 percent—has been found to possess wilderness characteristics and values. The suitable areas contain no permanent improvements, have

only minor human impacts, and provide outstanding opportunities for solitude and unconfined recreation. They also contain important ecological, geological, archeological, educational, scientific, scenic, or historic resources. (See appended Wilderness Suitability Study.)

#### *FIRE MANAGEMENT:*

A fire management plan would be developed to determine the most appropriate method of fire management.

#### *QUATERNARY RESOURCES:*

A Quaternary Study is proposed to inventory and document the existence of these resources, and to recover valuable paleontological information.

#### *CULTURAL RESOURCES:*

Significant cultural resources could be located anytime in the future, and if so, would be evaluated, preserved, protected, and interpreted in a manner that leaves them unimpaired for future generations. All actions would comply with section 106 of the 1966 National Historic Preservation Act, as amended (16 USC 470, et seq.) and its implementing federal regulations. Compliance would be in accordance with the Programmatic Agreement between the Advisory Council on Historic Preservation, the National Conference of State Historic Preservation Officers, and the National Park Service.

A complete and systematic archeological survey would be completed and the significance of the prehistoric resource would be evaluated, to provide adequate baseline information for effective management and to determine the eligibility of the park for inclusion in the National Register of Historic Places. A thorough documentation of rock art locations and conditions

would also be undertaken. All properties in or potentially eligible for the National Register would be managed in accordance with Cultural Resources Management Guidelines (NPS-28), the National Historic Preservation Act (16 USC 470, et seq.), and Executive Order 11593, "Protection and Enhance-

The problem of vandalism to cultural sites would be addressed by increasing ranger patrols in the backcountry and by improving the educational programs that inform the public how to visit, and understand the fragility of, cultural sites. Archeological sites, including rock art, would be monitored



ment of the Cultural Environment" (*Federal Register* 36:8921).

Eleven ruins were stabilized in the 1980s to arrest deterioration, and their condition has been monitored since. Numerous other ruins in the park need similar attention to ensure that this important resource is properly preserved. A stabilization specialist would inspect all such structures and prepare a stabilization plan that would be accomplished on a cyclic basis by qualified personnel.

for deterioration, and management actions would be taken to protect the prehistoric resource.

An Ethnographic Overview and Assessment would be prepared in consultation with traditional authorities of American Indian groups, and with reference to literature and field work information, to determine what subsistence, religious, and other historic significance the park has to American Indians. All Ethnographic Overviews and Assessments will be completed as funding becomes available.



## *Visitor Use and General Development*

### *DESIRED VISITOR*

#### *EXPERIENCE/APPROPRIATE USE:*

The park contains a variety of natural, cultural, and man-made features. An analysis of these features and their characteristics shows that different areas of the park inherently offer different experiences and lend themselves better to some uses than others. The features and characteristics that contribute to the different experiences and were analyzed include topography, geology, soils, vegetation, views, climatic conditions, ease or difficulty of access, physical challenge, the resource's tolerance of use, opportunities for solitude or encounters with others, and noise levels.

The park encompasses two major landform types—mesas and canyons. Both offer excellent recreational opportunities, but they also offer different experiences. The mesa is the higher, flatter elevation area. Vegetation is primarily piñon-juniper, with little ground cover. This type of vegetation is not very tall and does not provide much shade or shelter; therefore, the plateaus are quite sunny, extremely hot in the summer months, and windy at any time. The mesa can be a very harsh environment. The geology is composed of slickrock and the fragile cryptogamic soil (see the Geology and Soils sub-section of the Affected Environment chapter). Water is scarce to non-existent on the mesa. However, the mesa offers spectacular views down into the canyons, and long-distance views across the canyons and the mesa itself. The three bridges are seen from above and from a considerable distance. Also visible

from the mesa are archeological sites and more recent man-made features such as roads, buildings, chained areas, and mine tailings. Views are not confined to those within park boundaries, but extend as far as the horizon allows. There is little physical or psychological confinement on the mesa; people are on top of the open range.

The physical challenge of recreating on the mesa is moderate. Access to it is relatively easy; however, the extreme climatic conditions can be a limiting factor to users. Possible encounters with others on the mesa are likely to occur, but not likely to occur frequently. Encounters with National Park Service staff on the mesa would be limited. The potential for solitude is moderate. Although people may not encounter others, sounds travel a good distance over the mesa. For instance, vehicles, equipment, and airplanes can be heard; and signs of civilization can be seen over the mesa. The fragile soils are the most critical limiting factor in determining what uses are appropriate on the mesa. Because of the relatively flat topography, access to, and use and development of, the mesa are relatively easy; however, use and development are the cryptogamic soil's worst enemies.

The canyons are 500 to 600 feet below the mesa. The canyon walls block the winds and help keep the canyon bottom cooler than the mesa. Vegetation is very different from that of the mesa, consisting of willow, cottonwood, and box elder, and is representative of typical riparian communities in the Cedar Mesa area. This vegetation and the pools, springs, seeps, and wet soils add to the cooling effects found in the canyon. Therefore, the environment is not as harsh for visitors as

it is up on the mesa. However, access into the canyons is increasingly difficult because of the steep grades. Once people are in the canyons, the physical challenge of hiking through them is easy to moderate, except when streams have appreciable flows and must be forded or avoided by skirting cliff walls at every bend in the stream. The experiences in the canyons are more of confinement—physically and psychologically. Encounters with other visitors and NPS staff would be infrequent. The potential for solitude is high. Views are more narrow and linear—down the length of the canyons, and up to the mesa. The bridges, however, are viewed from ground level. People can walk up to them, around them, and under them—and touch them. All three bridges can be hiked to from the canyon bottom. Modern man-made structures are not visible, with the exception of the three existing overlooks along the mesa edge on Bridge View Drive. The environment in the canyon is quite sensitive, and recovers extremely slowly from impacts of use.

Based on this analysis of potential experiences, the park would be zoned into classifications that describe how each zone should be managed. Four zones seem appropriate at Natural Bridges National Monument: a mesa natural zone, a canyon natural zone, a motorized sightseeing zone, and a development zone (see Visitor Experience/Management Zones map).

A large area of the park has been determined to be suitable as wilderness (see appended Wilderness Suitability Study). This area coincides with the canyon natural zone and portions of the mesa zone; therefore, uses and restrictions relative to wilderness designation apply to those zones.

The purposes of wilderness include recreation, scenic preservation, scientific study, education, conservation, and historical use. Wilderness areas should offer outstanding opportunities for solitude, where man is a visitor who does not remain. Land is undeveloped, retaining its primitive character and influence, without permanent improvements or human habitation. The imprint of man's work is substantially unnoticeable. No new utility lines may be installed in wilderness. An area that attracts visitors primarily for the enjoyment of solitude and unconfined reaction in a primitive setting may contain historic features; however, features that are primary attractions for park visitors are not to be recommended for wilderness. Potential wilderness will be managed as wilderness, to the extent that existing, non-conforming uses will be allowed and park managers will seek to eliminate the temporary conditions that preclude wilderness designation. The National Park Service would take no action that would diminish the wilderness suitability of an area recommended for wilderness.

Potential experiences in the mesa and canyon natural zones and wilderness subzone would be experiences where visitors could find solitude away from other visitors and contemplate the natural creation of the bridges or the historic significance of the archeological sites that can be found throughout the park. Uses that would be allowed within these zones are those that do not adversely affect the resources and natural processes, such as hiking, photography, and research. To respect the topography and natural resources, vehicles would not be allowed in this zone. Visitors would be on their own, with little contact with



park staff or other visitors. Trails would be defined but not paved, and the physical challenge of hiking them would increase beyond the ability required to hike trails found in the developed zone. Facilities allowed in the natural zone would be few, would be dispersed, and would have little effect on scenic quality and natural processes. Signs, wayside exhibits, and primitive shelters are examples of appropriate facilities in the natural/cultural zone.

Early park planners obviously realized the opportunity for and ease of access for viewing the bridges from the mesa's edge, which most likely resulted in the construction of Bridge View Drive. Based on observations that park managers have made in recent years and known information about who comes to the park and why, the topography of the land, and the ability of the resources to accommodate use, park managers believe that this experience is a valid and appropriate one. For most visitors, their trip to Natural Bridges is not intended to be a primitive one, and viewing the bridges from the roadside overlooks is their most appropriate way of experiencing the natural wonders in the park. This, in itself, offers a new visitor experience, and a third management zone of motorized sightseeing. Bridge View Drive and Utah 275 would be included in this zone. In addition to the experience of driving the road to view the bridges, interpretive facilities along the road and bicycling would be appropriate in this zone. The picnic area would continue to be located at the visitor center. The existing picnic site along Bridge View Drive would be removed and re-vegetated.

A number of visitor and support facilities are necessary to support visitor activities and management of the park. Those determined to be necessary on site would be located in the development zone. The area of the park already developed with permanent, man-made facilities would be known as the development zone. This zone is appropriate as a development zone because of the existing development; it is away from the mesa's edge; it is near the park boundary; it is relatively flat and well screened by vegetation; and it is easily accessible to visitors upon their arrival at the park. Little solitude would be found in the development zone, and facilities would likely alter the natural environment or setting. Existing facilities in the development zone include the visitor center, administrative offices, employee housing area, maintenance facilities, campground, amphitheater, and utilities.

#### *INFORMATION/INTERPRETATION:*

Information and interpretation at Natural Bridges should compliment the potential experiences of each management zone, and focus on enhancing visitor awareness, understanding, and appreciation of the three natural bridges and their setting. Information and interpretation should also compliment White Canyon and the geology, archeology, and ecosystems of the park and adjacent area. Both would improve communication about safety hazards (specifically heat, lightning, flash-flooding, steep drop-offs, confusing terrain, and icy trails in winter) and protection of natural and cultural resources. The level and type of interpretation would be responsive to the characteristics of the management zone within which it takes place.



The general interpretive themes and goals that the National Park Service would like all visitors to be aware of during and after their visits to the park, and that the interpretive program would focus on, include:

### Themes

- Geology/sculpture of the land: Erosional forces shaped the canyons and the high plateau country, and formed the three sandstone bridges.
- Prehistory/history: Evidence of how past peoples used the area and coped with the environment is still present.
- Colorado Plateau environment/dry coniferous woodland: The environment dictates how humans, plants, and animals use the area.
- Park purpose/National Park Service mission: Natural Bridges was set aside to protect its natural, cultural, and scenic resources—preserving and protecting them for the enjoyment of present and future generations.
- Backcountry etiquette and techniques in an arid, fragile, desert environment—“leave-no-trace” concept.

### Goals

- To provide visitors with initial site orientation and information so that they can plan a safe and rewarding park experience.
- To provide for visitors, through appropriate visitor center media (exhibits, artifacts, AV) and services, an initial overview of the significance of the three natural bridges; the high plateau country in which they are located; and the plants, animals, and people that have inhabited the area.
- To provide appropriate on-site media (wayside exhibits, self-guiding publications) and personal services (roving interpretation) to enable visitors to fully experience, understand, and enjoy Natural Bridges to the depth that each wishes, and at his or her own pace.

- To protect natural and archeological resources by careful selection or siting of interpretive activities and media, and by educating visitors about the need for, and their own role in, resource preservation.
- To offer visitors the opportunity to acquire free publications and/or purchase publications and other educational materials that will provide more in-depth interpretation of the park story and themes, and that will serve as mementos of their visit to Natural Bridges.
- To provide opportunities for non-English-speaking visitors and visitors with physical, sight, hearing, and mental disabilities to experience, enjoy, and learn about the park.
- To make visitors aware of the mission of the National Park Service.
- To provide visitors with off-site information, to enhance visitor experiences and better spread use in the region.
- To make visitors aware of the fragility of the desert environment, and to offer tools that they can use to protect that environment.

To meet these goals, a variety of new park-related publications would be available in the visitor center. The visitor center would also be slightly renovated. The 600-square-foot exhibit room in the visitor center would have new, well-designed exhibits, which would enrich visitors' understanding of what they are about to see. These exhibits would interpret not only the formation of the bridges but also the geology, natural history, and human history of White Canyon/Cedar Mesa. These topics would be presented as part of a whole system. A high-quality, 7- to 10-minute video orientation program to further stimulate visitor interest would be shown in the auditorium. Visitors arriving after hours would find basic orientation, safety, and resource protection and other essential information in bulletin board/wayside exhibit structures



located on the patio outside the entrance to the visitor center. Minor improvements would be made to the amphitheater projection booth and screen to update these facilities. (See appended Plan for Interpretation.)

Because visitors at Natural Bridges may also be visiting Bureau of Land Management and U.S. Forest Service areas, a coordinated information and interpretive program would be beneficial to travelers. The NPS would like to coordinate with the BLM and USFS to develop such a program. This may require Natural Bridges to provide space or other services for these agencies, and vice versa.

A Plan for Interpretation for Natural Bridges National Monument, which is intended to guide the development of interpretive media proposed under this alternative, is appended.

#### *ACCESS/CIRCULATION:*

A joint National Park Service/Bureau of Land Management plan for the park entrance corridor would be developed and implemented. The objectives of such a plan would be to accomplish the purpose of the land withdrawal, which is "for the establishment of an access road to the Natural Bridges National Monument, and for protection and preservation of scenic and recreation values."

#### *VISITOR FACILITIES:*

Natural Bridges National Monument is a small park within the area, and the amount and location of visitor facilities must stay in scale with their surroundings. Thus, facilities cannot be greatly enlarged without dominating the visual and natural resources and thereby changing the character of the park. Therefore, proposed development is

minimal. (Please refer to Proposal map on page 35)

The visitor center would remain as the major information and interpretive center in the park. Minor improvements would be made to improve information and interpretive services; and circulation within the visitor center would benefit visitors' experiences at the park and the Cedar Mesa area in general. Within the visitor center, additional space amounting to approximately 500 square feet would be added on the north side in order to consolidate the book sales area in one place, away from the flow of traffic. Space in the exhibit area would be rearranged and used more efficiently in order to provide more effective interpretation. The seating and projection arrangement in the auditorium would be re-designed to accommodate approximately 30 visitors, and the image area would be raised to make it visible to the entire audience. (For greater detail, see appended Plan for Interpretation.) Slight changes would be made to the visitor center parking lot to improve vehicular circulation.

If the visitation or the length of stay should increase to the point that the visitor center or other visitor use facilities are at capacity, these facilities would not be expanded again; rather, visitor services would be re-designed or re-located to other areas within or outside the park in order to reduce the length of stay and move people through the facilities more quickly. As mentioned earlier, the National Park Service would also coordinate with other federal and state agencies to provide information and/or facilities elsewhere. This is preferred to substantially expanding visitor facilities because of the fragile, erodible soils, steep slopes, and potential archaeo-



logical sites, and to keep such facilities in scale with the landscape.

Based on an investigation of all additional areas in the park where the terrain would be generally suitable for development, the location of known archeological sites, the fragility of soils in the area, access roads, and cost-effective management of a campground, it was determined that expansion of camping in the park would not be feasible or responsive to natural resources. Additionally, most people who camp (along with the almost equal number who are turned away each year) at Natural Bridges do not do so out of a specific desire to camp within the park. Their reasons for camping at this particular location more often relate to the fact that Natural Bridges is the only developed campground for more than 40 miles in any direction. It does not seem to be critical that developed camping facilities be available within the park as long as such facilities are available in the area. Therefore, the National Park Service proposes that appropriate campground facilities be developed outside, but within reasonable distance of, the park. If possible, such facilities would be located on private and/or state lands. However, due to the scarcity of such lands in the general area, the complete solution to this issue would probably also involve Bureau of Land Management lands. There are several cooperative management scenarios for such facilities, including maintenance, law enforcement, and interpretation, which would be considered by the NPS. At the time replacement camping is provided in the area, an examination of the most appropriate use for the existing campground at Natural Bridges National Monument would be conducted. Al-

ternative uses such as a picnic area or reserved group campsite would be considered. At that time, the amphitheater would be converted to a day-time interpretive facility for various demonstrations and special programs for schools and other groups.

In the meantime, due to the poor layout of, and circulation within, the campground, and the fact that it will be 10 years or longer before camping is provided elsewhere, the campground would be slightly improved. Tent pads would be enlarged to accommodate most large tent sizes, and road improvements would be made to more safely accommodate two-way traffic. The capacity of the campground would remain at 13 sites, with one group site and one site for persons with disabilities. Water provisions would continue to be absent at this campground.

Because peak daily visitation at the park occurs between 10 a.m. and 3 p.m., and because of the distance to other facilities, picnicking at Natural Bridges is an appropriate use. To accommodate this use, picnic tables located on the patio at the visitor center would remain, and conversion of the existing campground to a picnic area would be considered when adequate camping is developed elsewhere.

Visitor comfort amenities would be added at many of the pullouts along Bridge View Drive for health reasons and to enhance visitors' trips. These include comfort stations, benches, bicycle racks, and trash containers. Because the topography to the Kachina Bridge overlook is too steep to make the trail accessible to persons with disabilities, a second overlook near the parking lot would be provided.



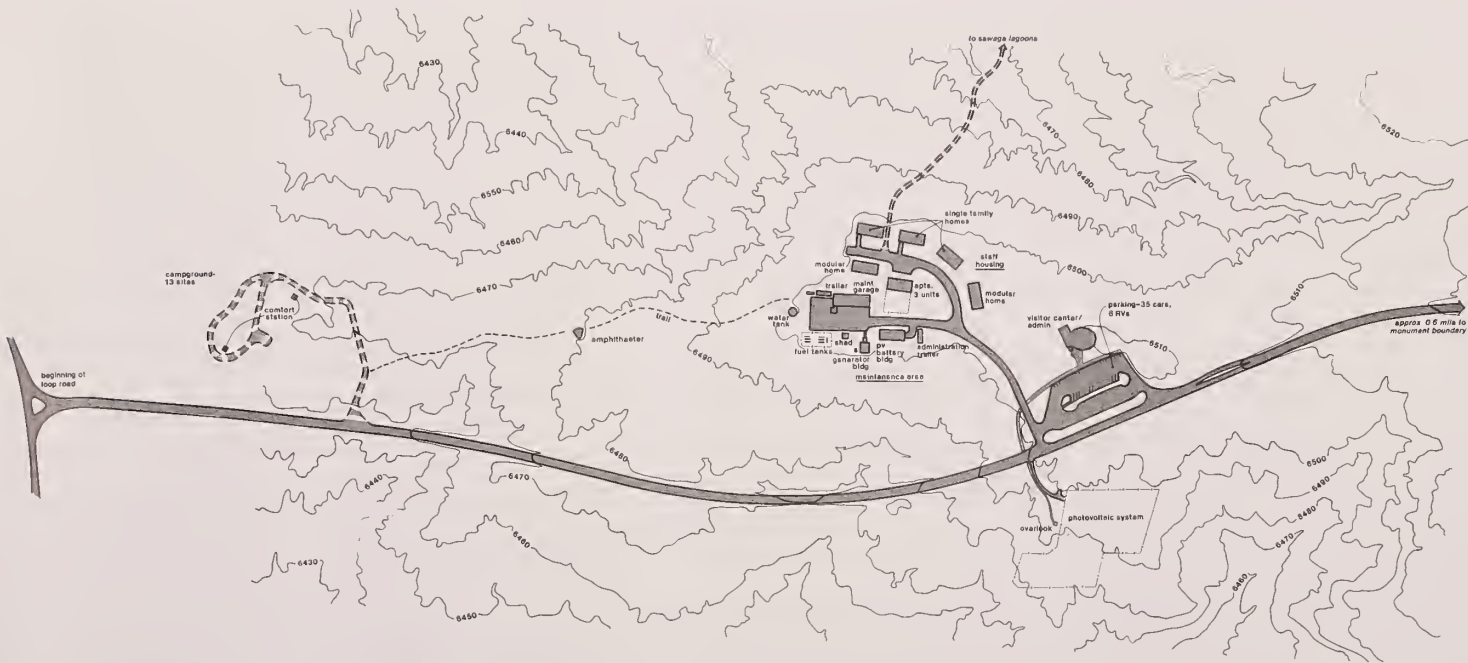
Sipapu Bridge

Vehicular traffic in the park has not yet become unmanageable or detrimental to the resources or visitor experience, even though much of the park experience consists of driving the loop road. However, it is possible to foresee the level of vehicular traffic rising to a point where the one-way loop road and overlook points would be too crowded and negatively impact visitors' experiences and/or the resources. Therefore, this plan proposes that a transportation study be undertaken for Natural Bridges National Monument, in conjunction with the visitor experience and resource protection program, to determine how future vehicular use

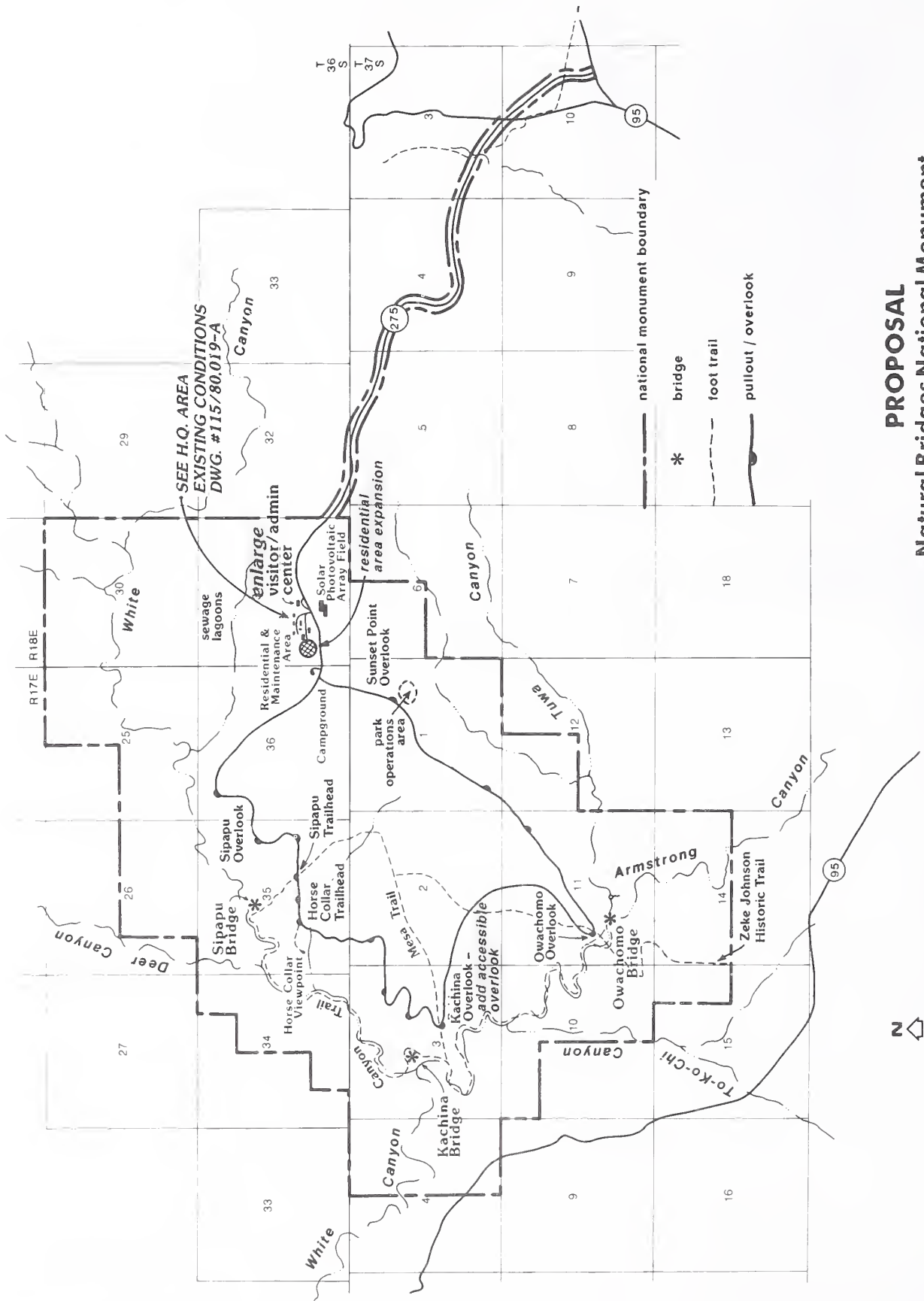
could be accommodated within the limits of the existing parking areas. The study should examine options for accommodating vehicle use such as reservations, traffic controls, and public transit in lieu of more environmentally damaging measures such as expanding the parking areas.

A Facility Design Guideline (appended) has been developed to guide the architectural style of proposed facilities and amenities and ensure that they blend with existing facilities and the surrounding natural environment. The guideline should also be followed while maintaining, rehabilitating, or replacing existing facilities.





**Headquarters Area  
Existing Conditions**  
Natural Bridges National Monument  
Utah  
United States Department of the Interior — National Park Service



# PROPOSAL

## Natural Bridges National Monument

### San Juan County, Utah

United States Department of the Interior - National Park Service

## *Human Resources and Park Operations*

### *HOUSING AREA:*

The daily commute to Blanding, Utah—population 3,162 (and the closest town to the park)—is 43 miles each way, and at least a 1-hour drive. Although that is not a prohibitive amount of time, the drive can be a difficult and dangerous commute in this part of the desert. Roads are narrow, winding, and steep. Weather conditions are unpredictable, with strong winds, blowing snow, and poor visibility common on the roads during the winter months. This is also open-range cattle country, where cattle can frequently, and unexpectedly, be found standing on the road. Because of these conditions, along with the total lack of services or residences along the way, commuting to and from work in this area is not the same as commuting to work in the city.

In addition, the amount and variety of housing available for sale is limited in Blanding. There were, in the spring of 1995, eight units on the market in the Blanding area, all of which have been on the market for 4 or more years, and none of which any local lending institutions are willing to finance. New construction, as well as those units that come on the market that local banks will finance, fall within the \$100,000 to \$200,000 range. In the last 4 years, no new houses have been constructed in the Blanding area that sell for less than \$100,000—with most of them in the \$150,000 plus range. Rental units are similarly limited, with usually no more than three to four units available at any time—most of them either unfurnished houses or small rooms in poor repair. Landlords of the limited number of well-

maintained apartments that are occasionally available are reluctant to rent such units on a short-term (seasonal) basis. Some adequately maintained low-income housing is available, but potential renters must wait several months on a waiting list for a vacancy. To improve the situation, the San Juan County Economic Development Board has recognized that a shortage of housing available for rental or purchase exists and has developed strategies such as further development of low-income housing and working with financial institutions to reduce their reluctance to make mortgage loans in this remote portion of the state. However, according to local realtors and housing managers, for the foreseeable future (5 to 10 years), purchase housing and especially rental housing will continue to be very limited. This situation is exacerbated by the fact that the San Juan Campus of the College of Eastern Utah, which is located in Blanding, has very limited on-campus residential facilities, and students therefore deplete the already limited rental-housing market in town.

The next closest community is Monticello, 65 miles from the park. The housing available for sale or rent there is even more limited than in Blanding, because of a local Superfund project. Workers at the Superfund site occupy any potential vacancies, and clean-up of the project is estimated to last beyond the year 2000.

Because of the lack of housing and the difficulty of commuting, the National Park Service feels that it is reasonable to continue to provide housing for most—80 to 90 percent—of park employees. Housing for 100 percent of the employees is not planned for, because it is foreseeable that there will

always be someone who, due to personal circumstances, (e.g., because they have school-age children) feels it is imperative to live outside the park and incur the difficulty of commuting to the park every day. Accommodating existing and projected employee levels will require the replacement of existing trailers and temporary modular structures, as well as the construction of new units.

In addition, it would be redundant and extremely expensive to construct another housing area—with all its new power, water, sewage lagoons, and roads—elsewhere on Cedar Mesa, when all those requirements are already in place at the park. Therefore, housing for Bureau of Land Management employees would also be located at Natural Bridges.

The two existing three-bedroom substandard modular homes and a three-bedroom trailer in the maintenance area are to be replaced with permanent structures in 1996 or 1997.

Funding for these units is from a special housing initiative aimed specifically at replacing trailers and substandard housing units in all the national parks. The Trailer Replacement Housing Initiative Fund will be used to replace the total of nine bedrooms needed with an equivalent nine or 10 bedrooms. Funding for these units is not available at this time.

The plan is for one triplex and one duplex unit, all with two-bedroom units, and an eight-bedroom dormitory. One duplex will be designed to accommodate one or two permanent employees; and the triplex will be designed to accommodate six seasonal employees—two per unit, each with his or her own bedroom. The addition of the one triplex and one duplex to the park will

result in living units to accommodate a total of 10 employees, or 70 percent of the existing and foreseeable number of permanent and seasonal employees (considering that there is typically at least one married couple who are both employed at the park and occupy the same unit). The dorm will accommodate very short-term employees. An environmental assessment for this specific action was prepared, and approved in the spring of 1995.

It is estimated that housing for an additional 10 persons will be needed over the next 10 to 15 years, including four BLM seasonal employees. New units can be accommodated by expanding the housing area into the area shown on the Proposal map. The exact type of unit (i.e., a two-bedroom duplex for permanent employees, or a six-unit apartment building for employees) will be determined through a comprehensive design process at the time when funding becomes available.

#### *ADMINISTRATIVE OFFICE SPACE:*

Most Natural Bridges personnel do more than one type of duty, and interact with visitors throughout the day. Therefore, it is important for most park personnel to be present in the park rather than at an office in Blanding or in Moab with the Southeast Utah Group office. Working at Natural Bridges can become very stressful for park employees because of the fact that most of them work and live at the park and must interact with each other day and night, while on and off duty, and because they are isolated from typical community services and other people. The NPS feels it is important that employees' working and living conditions are of sufficient size and design to provide for some "personal space" where employees can feel they



have some privacy. Therefore, 900 to 1,200 additional square feet of administrative (office) space will be provided at the park.

Action in this proposal, to increase interpretive programs, resource management activities, visitor protection, and additional park facilities, would require additional staffing of 4.2 FTE as follows:

1. Division of Management and Administration, Clerk Typist (part-time), GS 04, 0.8 FTE: This position would provide clerical assistance for timekeeping, telephone reception, maintenance management system, and fee collection.
2. Division of Interpretation, Resource Management and Visitor Protection, Biological Technician, GS 05, 0.7 FTE (subject to furlough): This position would provide services as a biological technician and implement the Resource Management Plan. Responsibilities include: performing plant/animal surveys, serving as the GIS coordinator, and documenting/monitoring resource issues and concerns. This individual would also serve as the coordinator with the SEUG in the implementation of resource management projects.\*
3. Division of Interpretation, Resource Management and Visitor Protection, Park Ranger (seasonal), GS 05, 2.0 FTE.\*
4. Division of Maintenance, Maintenance Worker (seasonal), WG 05, 0.7 FTE: Assists in activities such as road and trail maintenance, plumbing, carpentry, and custodial work on buildings and grounds; and performs minor mechanical repairs.

\* Note: Positions numbered 2 and 3, above, would allow for increased hours of visitor center operations (8:00 a.m. to 6:00 p.m., March through October). They would allow for increased frequency of formal programs and decrease the dependency on Student Conservation Association members and Volunteers-In-Parks for key interpretive services. The individuals in these positions would also assist in fee-collection operations.

#### **MAINTENANCE AREA:**

To provide necessary maintenance space, a new 30 x 60 foot garage would be built in the maintenance area at the west end of the existing garage. The trailer used for housing temporary and visiting staff would be removed when new housing is constructed in the housing area. A 30 x 30 foot storage shed would be constructed near the photovoltaic system building. Because of the existing infrastructure at the park, and the lack of an infrastructure elsewhere on Cedar Mesa, the NPS would work with the BLM to provide cooperative, co-funded maintenance services.

It is estimated that implementation of the proposal would increase annual operating and maintenance costs to \$500,000.

#### **UTILITIES:**

Future development would be connected to the existing sewer system, which flows to a lagoon system. There are three lagoons, but only two of them are needed to handle existing use. Based on a 1994 on-site investigation by region and park staff, proposed development will probably require the park to line and use the third lagoon. A lift station may also be needed for the future housing units in order to connect to the existing sewer system.

A preliminary investigation of the water supply system was completed in the fall of 1994. It estimated that yield from the two water wells is sufficient to meet current needs and anticipated future demand increases. However, continued monitoring of pump performance and aquifer response is necessary to provide an early warning of a reduced well yield and to assess the limitations of ground-water withdrawals and impacts to the water and related resources in the park.

Commercial phone service is in place in order to provide a reliable and permanent phone system to the park and its residents. All other utility systems would remain in place to service the park.

### ***Plan Implementation and Development Phasing***

#### ***PRIORITIES/COSTS:***

Phasing priorities and Class C development estimates for implementation of the proposal are summarized in a table that follows the Future Plans and Studies section.

The estimates represent gross costs (including project planning, construction supervision, and contingencies) in 1994 dollars. (See the appended "Plan for Interpretation" for interpretive media costs.)

### ***Future Plans and Studies***

The following is a summary of additional plans and studies that were identified earlier in the proposal and will be needed to fully implement the proposal:

- Transportation Study
- Hydrologic Study
- Visitor Experience and Resource Protection Program
- Housing Management Plan
- Visitor Profile Study
- Regional Campground Plan
- Ethnographic Assessment
- Archeological Survey
- Entrance Corridor Management Plan

Table 2: Proposal Estimate

PRIORITY		QUANTITY	GROSS COST
1	<i>Expand Administrative/Visitor Center Facilities</i>		
	enlarge visitor center for book sales area	500 sf	187,200
	enlarge administrative area	1,400 sf	338,520
	rehab visitor parking lot	1 lump sum	46,800
2	<i>Add Site Amenities Along Bridge View Drive</i>		
	install benches	8 ea	10,608
	install vault toilet	1 ea	11,700
	install bicycle racks	8 ea	8,112
	add trash containers	8 ea	5,616
	construct accessible Kachina overlook	1 lump sum	39,000
3	<i>Construct Maintenance Area Facilities</i>		
	construct maintenance garage	1,800 sf	379,080
	construct storage shed	900 sf	56,160
4	<i>Rehab Campsites</i>		
	enlarge tent pads	300 sq yd	6,552
	widen campground road	5,000 sf	35,100
5	<i>Construct Employee Housing</i>		
	2-BR triplex	1 unit	436,800
	2-BR duplex	1 unit	436,800
	8-BR dormitory	1 unit	998,400
	construct new road	0.09 mi	115,830
	connect sewer	1,000 lf	46,800
	connect water	500 lf	23,400
	connect gas	500 lf	23,400
	connect power	500 lf	15,600
	rehab second sewage lagoon	1 lump sum	62,400
	install 15" concrete curb & gutter @\$40/linear ft	3,835 lf	239,304
	install sidewalk @\$55/sq yd	2,000 sq. yd.	171,600
	<b>TOTAL PROJECT COST</b> (includes contingencies, supervision, & advanced & project planning cost)		3,694,782

## ALTERNATIVES CONSIDERED BUT REJECTED

### *Boundary*

An alternative for boundary expansion that would have added approximately 30,000 acres to the park was considered. Detailed rationale for rejection of this alternative can be found in an appendix.

### *Camping*

The demand for developed camping far exceeds the 13 sites available at Natural Bridges National Monument. Knowing this, the planning team conducted a survey of potential expansion sites within the park. The park has a limited land base, and the areas likely to be compatible for campground expansion are very small. Small, separate campgrounds would be difficult to manage.

The addition of up to 40 campsites in the area of the existing gravel pit was considered. This option was rejected based on the consensus that the addition of so many campsites would change the primitive character of Natural Bridges and thereby eliminate the unique camping experience presently sought and enjoyed by visitors. Access to and from the gravel pit area is also difficult, considering its location on the end of a one-way loop road.

Addition of campsites directly east, west, or north of the existing campground was also considered, but was rejected, because of site considerations. The area north of the campground would be impacted by excessive erosion due to the fragile soil and steep terrain. Extensive archeological resources preclude expansion to the east and west.

Permanently closing the campground was considered. Because the demand is so high for overnight camping, the 13 sites provided at Natural Bridges will never accommodate anything but a small percentage. By closing the campground, travelers would no longer be tempted to come to the park just to—hopefully—find a campsite. However, this would simply move the problem to another area of Cedar Mesa, so this alternative was rejected. After examination of the most appropriate use of the existing campground, should sufficient camping be provided elsewhere in the area (by the BLM, USFS, or State) it was determined that, the Natural Bridges campground would be used for reserved group camping, converted to a picnic area, or used for other administrative needs.

Implementing a reservation system was also considered, but rejected due to the manpower and expense that would be required to implement and maintain such a system, compared to the extremely small number of sites available.

No other areas within the park boundary are considered appropriate for a campground because of archeological resources, soil, terrain, and/or security and maintenance limitations.

Possible areas for providing camping outside the park include BLM and state lands throughout the Cedar Mesa area and USFS land within the Manti-La Sal National Forest. Specific locations have not been identified at this time; however, the BLM has stated that potential exists to add developed campgrounds in the area.



### *Housing*

Alternatives for housing outside the park are few, but include developing a joint housing area with the BLM on BLM land. However, BLM estimates that over the next 10 to 15 years, they will have fewer than six employees—primarily seasonal employees—in the area who will need housing, and there is no existing utility system in place anywhere on Cedar Mesa outside the park. Construction of a new permanent housing area with utilities would require an enormous capital investment by the federal government, and would result in significant resource impacts to duplicate facilities already available within the monument.

Requiring employees to find housing outside the park in Blanding, Monticello, or elsewhere was considered. For the reasons given above, in the proposal section, this does not seem feasible for all employees. It may be possible for one or two permanent employees, who are not required to live at the park in order to provide for protection, emergency services, and emergency maintenance, to find affordable housing in one of these communities. Also, with changes in recruitment and hiring practices, it may be possible to hire some seasonal staff who live within commuting distance. However, it is not practical to expect more than 10 percent to 20 percent of the total park staff to be housed outside the monument.

Creating a partnership with another entity—non-profit, or private developer—was considered as a way to provide housing outside the park.

This, too, would require the development of a significantly large and entirely new independent utility infrastructure system, increasing the overall amount of impacted land. Such a facility would almost assuredly have to be located on state or BLM lands because little reasonably accessible private lands exist in the area. At this time, there is no known party interested in this type of venture.

### *Administrative Office Space*

There are few alternatives for providing administrative office space for park employees. The U.S. Forest Service has no administrative space needs in the vicinity of Natural Bridges. The Bureau of Land Management has need for small space for their Grand Gulch (currently seasonal) operation, which is currently provided in a trailer at the Kane Gulch site. There are plans to construct new permanent space for this use near the same area within the next 2 years. Other BLM and USFS administrative space is located in Monticello, Utah, 65 miles away. Alternatives for locating Natural Bridges office space at the Southeast Utah Group Office in Moab or in Blanding or Monticello were considered. National Park Service offices in Moab do in fact currently provide space for shared administrative, resource management, and other office staff. Only two management/administrative positions are actually stationed at the park, and even these positions are regularly involved in the operation of the visitor center and day-to-day operation of the park; therefore, full-time assignment outside the park is not practical.

## SUMMARY OF ALTERNATIVES AND IMPACTS

Table 3: Summary of Alternatives and Impacts

RESOURCE	ALTERNATIVE A: NO ACTION	ALTERNATIVE B: THE PROPOSAL
Geology/Soils	Minor continual disturbance of soil and vegetation adjacent to use areas.	3.7 acres of impermeable, heavily compacted surface would result. Well-marked trails would limit trampling of soil and vegetation. Compaction and erosion of soils on BLM lands would continue from overflow of camping.
Vegetation	Increased erosion could result in mortality to trees because of root exposure. Undefined trails would continue to result in destruction of cryptogamic soils.	Clearing of 3.7 acres of piñon-juniper community. Visitor trampling reduced by trail delineation. More impervious surface would cause drainage to other areas, which could change vegetative composition.
Water Resources	Possible accelerated depletion of aquifer with increased visitation.	Erosion from trampling, which causes increased turbidity, should decrease after construction of parking, trails, and walkways. Temporary reduction in surface water quality during construction.
Flood-plains/Wetlands	No impact.	No impact.
Wildlife	No change in impacts.	No additional impacts.
Threatened/Endangered Species	No impact.	No impact.
Air Quality	Increased auto emissions as visitation increases but not enough to violate air quality standards.	Localized, elevation of particulate matter and air pollutants during construction. Increased auto emissions from more visitation, but no violation of air quality standards. Implementation of transportation system could reduce vehicle emissions.
Visual Resources	No impact from activities within park.	Screening with vegetation and architectural design for compatibility with natural setting would mitigate visual impacts of construction.
Cultural Resources	Continued graffiti on rock walls, removal of stones and destruction of archeologically protected walls.	Ground disturbance near amphitheater and campground could impact archeological sites; mitigation would be necessary.
Ethnographic Resources	There are no known ethnographic resources within the park.	There are no known ethnographic resources within the park.
Visitor Use	Increased visitation would increase crowding at pull-outs, re-	Increased opportunities for persons with disabilities to visit

**Table 3: Summary of Alternatives and Impacts**

RESOURCE	ALTERNATIVE A: NO ACTION	ALTERNATIVE B: THE PROPOSAL
	ducing viewing and hiking opportunities. Inadequate staff levels would result in substandard visitor services. Camping would continue to be inadequate.	the park. Additional rest-room and other amenities around the loop road would improve visitor experience. Limited camping would remain but would be improved.
Interpretation	Visitor center media, auditorium, and amphitheater would remain substandard. Inadequate staff numbers would result in less-than-ideal interpretation.	Quality and accessibility of interpretive media and facilities improved. Safety and resource protection information more readily available. Evening programs and roving interpretation more frequent.
Socioeconomic	Slight increase to regional retail sales associated with increased visitation.	Temporary positive economic impacts during construction; more staff would mean slight long-term regional economic benefits. Improvements would support more visitation and longer stays.
Health/Safety	Minimal safety information would continue to be provided on the campground bulletin board.	Public health and safety would be enhanced through provision interpretive information on hazards like heat, lightning, flooding, and hazardous, confusing terrain. Restroom would be provided on the loop road.
Law Enforcement	No change in types of impacts, but additional visitation may further increase law enforcement load on existing staff.	More staff would allow better control of law enforcement problems within the park and on adjacent BLM lands and campgrounds.



## **THE AFFECTED ENVIRONMENT**

### **Natural Resources**

#### **GEOLOGY/SOILS:**

Elevations in the park range between 6,000 feet and 6,600 feet. The land surface is a deeply incised plateau with two major canyons—White and Armstrong—which join in the western part of the park. The geologic features of the park are the result of stream erosion of the massive Cedar Mesa sandstone—a member of the Cutler formation that dates to the Permian Era. The canyons of the park are similar to the canyons of the surrounding area, in that they are deeply incised into a relatively flat plateau. White Canyon is a major topographic feature of western San Juan County. The bridges were formed by stream-bed erosion (running water), and are geologically distinct from arches, which are formed by the action of groundwater, frost, and wind erosion. Soils at Natural Bridges are poorly developed, and are generally derived from residuum of the Moenkopi formation—a sandstone, mudstone, and siltstone deposit of the Triassic era. There is a zero-foot to 4-foot solid depth, with bedrock showing in many places. Erosion potential is high, especially on slopes and areas with no grass. Erosion potential is low around developed areas, and moderately high around rim areas. The Soil Conservation Service in Monticello, Utah, has performed a soil survey.

Cryptobiotic soil crusts are an important component of the vegetative communities. These crusts are a complex of cyanobacteria, mosses, lichens, green algae, and microfungi. They modify the environment by reducing soil erosion from wind and

water. They also contribute nitrogen to the ecosystem. These crusts are found throughout semi-arid regions of the world, but are best developed on the Colorado Plateau. These crusts are brittle and easily damaged by foot traffic, livestock, and motor vehicles, and are very slow in recovering from disturbance.

#### **PRIME AND UNIQUE AGRICULTURAL LANDS:**

The park includes no prime and unique agricultural lands. Other than a few isolated fields, the nearest agricultural lands are near Blanding, Utah, 45 miles southeast of the park. Some abandoned fields are present at Comb Wash, but they have not been farmed in years.

#### **VEGETATION:**

Vegetation of the park is divided into six categories: piñon-juniper (including four sub-types); grassland; riparian; hanging gardens; and Douglas-fir and ponderosa pine relict communities. The piñon-juniper community, excluding rimrock, is the most extensive vegetation type, covering approximately 4,200 acres. The piñon-juniper rimrock community is next in coverage, accounting for 2,700 acres. The riparian community accounts for roughly 400 acres. The Douglas-fir relict community encompasses less than 400 acres; and the hanging garden community is the smallest vegetal component, covering less than 80 acres. There is also a ponderosa pine relict community.

The piñon-juniper vegetation type is dominated by piñon and Utah juniper. This vegetation type can be subdivided into four different community types:



- The first type is a mixed shrub community made up of piñon, juniper, Utah serviceberry, Gambel oak, and several other shrubs.
- The second and third community types cover small areas in the park, and have big sagebrush or roundleaf buffaloberry as major components. Other major shrub components may be rubber rabbitbrush, singleleaf ash, mountain mahogany, narrowleaf yucca, Mormon tea, Fremont barberry, or mountain snowberry. Common forbs associated with these vegetation types are twinpod, bladderpod, lobeleaf groundsel, and Holboel rock cress.
- The fourth piñon-juniper type is the rimrock community—a shrub-dominated type of mixed composition found on the canyon rims. The primary components are piñon, Utah juniper, manzanita, Gambel oak, broom snakeweed, Utah serviceberry, longflower snowberry, and goldenweed.

Grasslands occur on benches at elevations immediately above the streambeds, where soils have accumulated. At higher elevations, piñon will invade the grasslands in a transitional zone. Grass species include Indian ricegrass, needle-and-thread grass, crested wheatgrass (an exotic), purple three-awn, and blue grama. Associated species may include Gambel oak, Mormon tea, yucca, prickly pear, squawbush, fourwing saltbush, and a variety of forbs.

The riparian vegetation communities are dominated by Fremont cottonwood, with the shrub understory being composed of sandbar, yellow and peachleaf willows, and boxelder. Utah serviceberry, Gambel oak, rab-

bitbrush, and fourwing saltbush may also be associated with the riparian communities. Of the many forbs and grasses that are in this vegetation community, the principal species are the common reed, horsetail, virgin's bower, and hairy golden aster.

The hanging garden vegetation type is characterized by moisture-loving vegetation, and often contains plants not found elsewhere in the desert. These include plants such as the maidenhair fern, cliff-brake, scarlet monkey flower, alcove death camas, columbine, alcove bog-orchid, and kachina daisy.

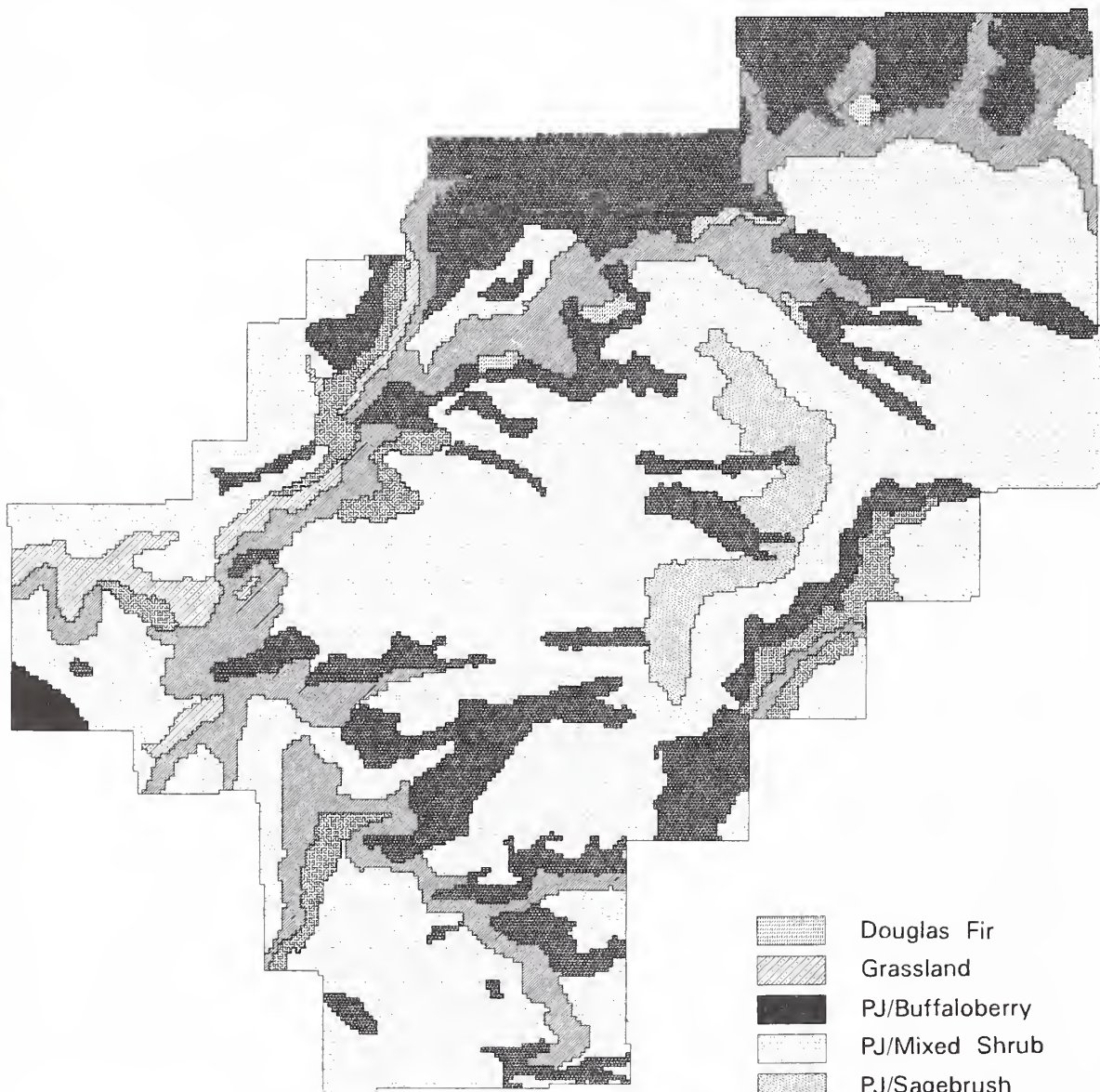
The Douglas-fir is a relict community, and is characterized by Douglas-fir, Utah serviceberry, mountain lover, dwarf mountain mahogany, and manzanita. The ponderosa pine relict community is composed of a few poorly developed stands of the pine mixed with Fremont cottonwood. Many of the same shrubs found in the piñon-juniper mixed shrub community are also present in these stands.

#### WATER RESOURCES:

The watershed of Natural Bridges National Monument consists of portions of Armstrong and White canyons, which converge in the park at Kachina Bridge. There are several major tributary canyons: To-Ko-Chi, Deer, Tuwa, and Burch. The upper portions of these canyons are outside of the park boundary, and are subject to external influences—primarily grazing and recreation. These canyons are drained by intermittent streams that are fed by local storms. After rain or snowfall, water that cannot be absorbed runs off the surface into a natural network of small channels. Water quality is naturally turbid, because it readily picks up

sand, silt, and clay from the friable soils. The water resources of the area include a number of permanent seeps and springs in the park.

Five of these springs are included in the long-term monitoring program. The aquifer that feeds these springs is also being used as the water supply system for the park.












## Vegetation

Natural Bridges National Monument

Utah

U.S. Dept. of the Interior - National Park Service

115 • 80,030 - Mar 95 • RMRO

-  Douglas Fir
-  Grassland
-  PJ/Buffaloberry
-  PJ/Mixed Shrub
-  PJ/Sagebrush
-  PJ/Slickrock
-  Pinon Grassland
-  Ponderosa Pine
-  Riparian



**WATER RIGHTS:**

Water rights on the intermittent drainages in the park are undefined. The headwaters of intermittent streams in White, Armstrong, Deer, Tuwa, and To-Ko-Chi Canyons are located upstream of the park. The status of water uses upstream of the park is unclear. There are three wells in the park one of which is no longer in use. Currently, the State of Utah is conducting a water rights adjudication for the area east of the Colorado River, including Natural Bridges National Monument. The United States expects to be joined in this adjudication sometime in the future. The National Park Service has filed a statement of water user's claim for these wells with the State of Utah for the adjudication.

**FLOODPLAINS:**

Floodplains in the park are limited to the canyon bottoms and some of the large, dry washes on the mesa tops. Flooding is common in the late summer in particular, and sudden storms can lead to flash flooding along the canyon bottoms.

**WETLANDS:**

Wetlands are limited in Natural Bridges National Monument. The riparian areas in the canyon bottoms, although not extensive, are important wetlands, which include vegetation such as willow. Hanging gardens can also be found in the wetlands. Vegetation along the streams in White and Armstrong canyons provides important habitat for deer and other mammals, as well as migratory birds. The water is home to invertebrates not found outside this limited habitat.

**WILDLIFE:**

Common mammalian constituents of the park are the Western pipistrel, coyote, gray fox, white-tailed antelope squirrel, Colorado chipmunk, canyon mouse, deer mouse, piñon mouse, desert woodrat, porcupine, blacktailed jackrabbit, desert cottontail, and mule deer.

Common bird species likely to be found in the park are the turkey vulture, Northern harrier, red-tailed hawk, American kestrel, mourning dove, great horned owl, common nighthawk, white-throated swift, Northern flicker, hairy woodpecker, ash-throated flycatcher, horned lark, violet-green swallow, cliff swallow, scrub jay, piñon jay, common raven, plain titmouse, canyon wren, Western bluebird, American robin, loggerhead shrike, Bell's vireo, solitary vireo, gray vireo, black-throated gray warbler, green-tailed towhee, rufous-sided towhee, black-throated sparrow, dark-eyed junco, white-crowned sparrow, and Brewer's blackbird.

Common herptofauna of the park are the red spotted toad, Woodhouse toad, Great Basin spadefoot toad, tiger salamander, plateau striped whiptail, collared lizard, short-horned lizard, sagebrush lizard, Eastern fence lizard, tree lizard, desert night lizard, side-blotched lizard, Western whiptail, gopher snake, Western terrestrial garter snake, and prairie rattlesnake.

**THREATENED AND ENDANGERED SPECIES:**

The Endangered Species Act of 1973 (16 USC 1531, et seq.) requires that federal agencies conserve threatened and endangered species and their habitats to aid in population recovery. According to a 1990 memorandum

from the U.S. Fish and Wildlife Service, the peregrine falcon (*Falco peregrinus*), the bald eagle (*Haliaeetus leucocephalus*), and the black-footed ferret (*Mustela nigripes*) could occur in the vicinity of the park. None of these species is dependent on Natural Bridges for habitat. The bald eagle is only transient, and might occasionally prey on waterfowl attracted to the sewage lagoon. Peregrine falcons nest in some of the surrounding canyons, and Natural Bridges is an acceptable habitat for them. Surveys of the park have recently documented successful nesting by one pair of peregrines. There have been no documented sightings of the black-footed ferret. In addition, the ferruginous hawk (*Buteo regalis*), white-faced ibis (*Plegadis chihi*), spotted owl (*Strix occidentalis*), kachina daisy (*Erigeron kachinensis*), and alcove bog-orchid (*Habenaria zothecina*) are all candidate species that could occur in the project area. Although these species are not currently listed, it is likely that they will be in the near future. Although the candidate species have no legal protection under the Endangered Species Act, every attempt would be made to avoid impacting them, should they be found in the area.

In addition to the kachina daisy and the alcove bog-orchid, the spindly goldenbush (*Haplopappus scopulorum*) is considered rare by the Utah Native Plant Society.

#### WILDERNESS:

There is no designated wilderness in Natural Bridges National Monument. However, as stated earlier in this document, a large portion of the park has been determined eligible, and will be managed as wilderness. (Refer to

the appended Wilderness Suitability Study.)

#### AIR QUALITY:

National Bridges National Monument is designated as a class II clean air area under the Clean Air Act (42 USC 7401, et seq.). Maximum allowed increases (increments) of sulfur dioxide (SO<sub>2</sub>), particulate matter (TSP—total suspended particulates), and nitrogen oxides (NO<sub>x</sub>) beyond baseline concentrations of those pollutants cannot be exceeded at the park. These increments allow modest industrial growth in the vicinity of class II areas.

The park is in the Four Corners Interstate Air Quality Control Region. As of July 1, 1993, this region was classified by the Environmental Protection Agency (EPA) as attainment (better than the National Ambient Air Quality Standards) for all pollutants, including particulate matter (PM-10), sulfur dioxide (SO<sub>2</sub>), nitrous oxides (NO<sub>x</sub>), ozone (O<sub>3</sub>), lead, and carbon monoxide (CO). Air quality monitoring in the vicinity of the park is conducted at Moab (PM-10), and at Canyonlands National Park (O<sub>3</sub>, meteorological data, dry deposition, and visibility). There are no existing major stationary sources of air pollution within a 62-mile radius of the park.

The NPS has been conducting visibility monitoring at several units in southeastern Utah, including Arches, Canyonlands, and Capitol Reef National Parks, and Glen Canyon National Recreation Area. Because of the extremely low humidity in the area, clarity is mainly reduced by light scattering from suspended particulate and aerosol matter. Views of park features are diminished by effects of widespread human-caused pollutants, which reduce clarity of background land-



scapes, contrast, and general visibility. Major sources of air pollution that contribute to visibility reduction in the region include coal-fired power plants in Utah, Colorado, New Mexico, Arizona, and Nevada; and copper smelters in southern Arizona, New Mexico, Texas, northern Mexico, and the Los Angeles basin.

#### *VISUAL RESOURCES:*

The park's viewshed is an important part of the visitor experience at Natural Bridges. Once a viewshed has been identified there are no legal constraints associated with such designations unless they should encompass an area that is already encumbered by law such as legislatively established wilderness areas. Therefore, designation of a viewshed would not lock up or preclude land management or development related activities.

These viewsheds include views of the Henry Mountains, Bear's Ears, Monument Valley, Woodenshoe Butte, and Elk Ridge—to name a few. As in all parks in the Southwest, clean air and vistas of distant features are expected at Natural Bridges. The vistas have been deteriorating over the past few decades, due to the construction of fossil fuel power generating stations, increased dust due to construction activities, industrialization of the area, urban pollution sources, wood burning, and prescribed fire activities. Because the air in the area is historically clean, degradation is noticeable, with minor contributions of pollutants and dust. Visual quality could improve as power generation stations on the Colorado Plateau install pollution control devices.

The visual quality of Natural Bridges National Monument is characterized

by clarity of air, long views, and unobstructed views of the major resources. The developed area is relatively small in comparison to the entire park, and visitor/staff use areas are not within site of Bridge View Drive or other public use areas.

An absence of lights from a metropolitan area combined with clear air and the position of the park atop a plateau provides a nearly 360-degree view of the stars and an outstanding night sky.

#### *NATURAL SILENCE:*

Ambient noise levels in the park are low. The degree of silence one encounters in most of Natural Bridges National Monument is one of the park's most important resources. Most noise detected in the area is associated with wildlife activity, back-country hikers, high altitude aircraft, visitor traffic on the loop road, or the generator in the maintenance area. In the Spring of 1995 and 1996, a sound monitoring station was in place to begin developing baseline data on ambient levels of sound. At present, scenic air tours do not represent a threat to natural silence.

#### *Cultural Resources*

##### *INTRODUCTION:*

Natural Bridges National Monument contains cultural resources left by prehistoric Archaic, Formative, and Late Prehistoric peoples; by protohistoric and historic Ute, Paiute, and Navajo; and by historic explorers, cattlemen, miners, park staff, and visitors. Evidence of each of these cultural and historical groups and periods is summarized below. Before turning to this summary, it should be noted that very little of the park has been inventoried

systematically and intensively. Therefore, only a general idea of the archeological site types, settlement patterns, and time periods represented by the park is provided.

### *ARCHEOLOGICAL RESOURCES:*

#### Archaic Period:

Documentation of the Archaic period within the park is limited, but evidence from across Cedar Mesa indicates a fairly heavy use of the area during the Archaic.

#### Formative Period:

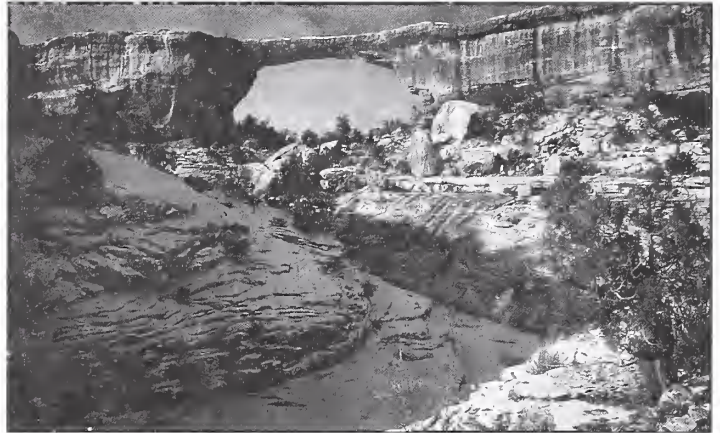
Ceramics and masonry structures of the Anasazi peoples are the best known cultural resources in Natural Bridges National Monument.

### *PROTOHISTORIC PERIOD/ ETHNOGRAPHIC RESOURCES:*

Ute and Paiute used the area around Natural Bridges from about A.D. 1250 through historic times, and the Navajo appear to have been in the area from about A.D. 1500. Like earlier Archaic people, Protohistoric peoples moved about the Colorado Plateau to obtain scattered and seasonally available natural resources. Like Archaic sites, Protohistoric sites are usually small, ephemeral surface scatters of stone tools and flaking debris. Protohistoric sites are distinguished from Archaic sites by technological differences: Protohistoric peoples used the bow and arrow with small arrow points, as opposed to the large dart points used for the atlatls or spear throwers of the Archaic people. Protohistoric sites can also be distinguished from Archaic sites by the presence of brownware pottery, and, in some cases, by the presence of Hopi yellow wares. The presence of Hopi yellow

wares does not indicate occupation by the Hopi, but rather points to extensive trade networks operating throughout the Colorado Plateau during the Protohistoric period.

At the present time, no American Indian sacred or culturally significant sites are known to be within the park. However, the Bear's Ears, outside park boundaries, have American Indian importance. It is possible that traditional cultural properties or sacred sites of the Navajo, Hopi, Paiute, or Ute peoples may be present within park boundaries.



*Owachomo Bridge*

### *HISTORIC RESOURCES:*

Although many historic sites are present in the park, there is only one structure officially listed on the National Register of Historic Places. This is the trail that led from the original ranger station to Owachomo Bridge. The trail was named for the first caretaker of the park, Zeke Johnson. Mr. Johnson also built the trail, and led many visitors on horseback through the park between 1923 and his retirement in 1941.



### *Visitor Use Statistics and Analysis*

Recreation and non-recreation visits are the two types of visits that are combined to determine the total visitation figures reported by units of the National Park System. Recreation visits are defined as the entries of persons onto lands or waters administered by the National Park Service for recreation purposes. Reportable non-recreation visits include visits by trades-people with business within the park, and government personnel (other than NPS employees) with business within the park. In 1987, the park began reporting a constant figure of 800 non-recreation visits per year. The overwhelming majority of visits to Natural Bridges National Monument are recreational visits. Visitation has steadily increased over the last 10 years. Total visitation in 1994 was 138,014.

The park is open all year. The park's "season" for visitation is April through October. Recreational use of the park begins to increase dramatically in May, and continues high in June, July, and August. On a peak day, visitation can be in excess of 900 visits. There is a second slight peak of visitation in September. This is attributed somewhat to the increase in the number of tour buses that occurs after Labor Day. It seems that the number of tour buses carrying older visitors is greater after school is back in session. The park receives only about a tenth of its annual visitation between November and March.

It is believed that the period from Tuesday through Thursday has a higher rate of visitor use than other days of the week. Many people visit this park while on their way to other destinations, or as part of a circle loop

tour of the Southwest/Four Corners area. Visiting the park at mid-week would coincide with arrival at another location—perhaps a final destination—on the weekend. There is higher visitation between 9 a.m. and 3 p.m. than during other periods of the day. Visitation also seems to increase around 4:30 p.m.

The only overnight accommodation available at the park is a 13-unit primitive campground. This is the only developed campground on the 1-million-acre Cedar Mesa plateau. The nearest other developed campgrounds are at Blanding, Utah (45 miles); and at Halls Crossing (60 miles) and Hite (50 miles)—developed areas at Glen Canyon National Recreation Area. Most visitors who camp at the park will stay only one or two nights; however, some will stay several days and use the park's campground as a base while touring other areas in the region.

Park managers estimate that most visitors originate from the Southwest and Rocky Mountain regions of the country. The park does receive significant foreign visitation throughout the year, with Germans being the most numerous of foreign visitors.

### *Socioeconomics*

#### *POPULATION:*

San Juan County is isolated, and the numbers of people that could be supported by the available local resources have never been very large. There are only two incorporated cities within the county (see following table). Outside of these towns, the remainder of the population is scattered among a few unincorporated sites and the rural areas of the county. Overall, the county has a population density of less than two people per square mile.

**ECONOMY:**

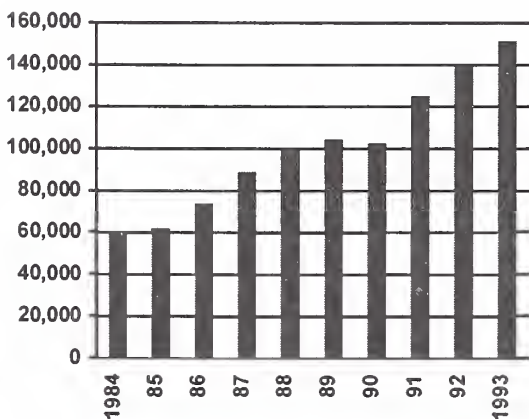
The county commissioners developed the Economic Development Board in order to assist with the economic progress of the county. Presently, San Juan County has connected with three other states in the Four Corners region, which have formed the "Four Corners Partnership," to encourage Southern California businesses to relocate in this area.

Monticello holds the county seat, and is 24 miles north of Blanding; 42 miles south of La Sal; and 17 miles west of the Utah/Colorado border. Blanding is located 24 miles south of Monticello, and is the largest community in the county.

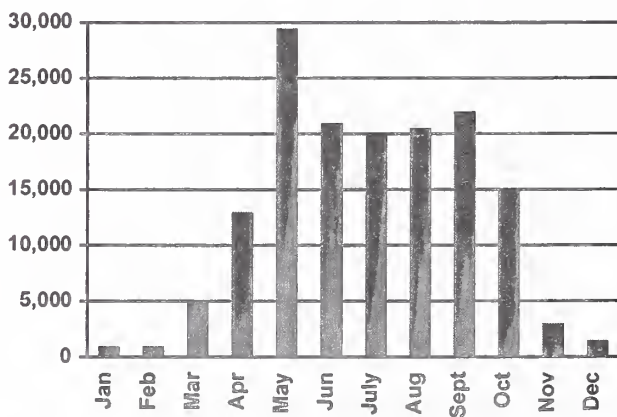
Historically, the county depended on natural resources for farming, ranching, and energy extraction. Agriculture is the oldest use of the land in the region; in fact, it has been a continual practice for 2,000 years. Early European settlers in the county were ranchers. Cattle and sheep ranching became the historic mainstays of the economy. In the late 1950s and early

1960s, oil and gas extraction became important in the county. This caused a boom-or-bust economic pattern. Presently, agriculture, energy extraction, and government are the main components of San Juan County's economy. In fact, per capita income for Utah ranked 48<sup>th</sup> out of 50 states (Economic Report to the Governor, 1993). San Juan County's labor force of 57.3 percent ranked 25<sup>th</sup> in the State of Utah.

The government is the largest employer in the county—principally the Bureau of Indian Affairs (BIA) and the Utah Navajo Development Council. The National Park Service is one of nine government agencies who contribute to the local economy. The 1994 fiscal year base operating budget for Natural Bridges National Monument was \$315,000. Sales benefits from park tourism totaled \$118,000 in 1994. The total combined sales from park operating expenditures was about \$1,475,485. Total tax revenue gained is about \$108,317. Operations and use of the park resulted in about 30 jobs.



Annual Park Visitation  
1984-1993



1993 Monthly Park Visitation



**Table 4: Population of Utah, San Juan County, and Selected Political Units**

Political Unit	1980 Census	1990 Census	Percent Increase or Decrease
Utah	1,461,037	1,722,850	17.92
San Juan County	12,253	12,621	3.00
Blanding	3,118	3,162	1.41
Monticello	1,929	1,806	-6.38
Unincorporated San Juan County	7,206	7,653	6.20

Source: U.S. Bureau of the Census

#### **TRANSPORTATION/ACCESS:**

Three federal highways (163, 191, and 666) traverse the county. The county has no federal interstate highways. A number of unimproved state and local roads provide important communications links throughout the county.

There are three airports within the county. Blanding and Monticello have 6,000-foot and 4,800-foot asphalt runways, respectively; and Bluff has a 4,400-foot dirt-surfaced runway. The airport at Monticello is 230 miles from Salt Lake International Airport in Salt Lake City. Blanding's is 271 miles from Salt Lake International.

#### **VISITOR SERVICES:**

Owing to the small and dispersed population of the county, services desired by visitors may not be readily available. Most services will be found in Blanding or the county seat of Monticello. There are two small hospitals in the county with a total of 56 beds. Motels, restaurants, and automotive services are also found in these two small communities.

The closest visitor services to Natural Bridges National Monument are at Fry Canyon, about 26 miles west on Utah 95. Gasoline, groceries, and some overnight accommodations are available there. The next available services are at Mexican Hat (south on Utah 261) and Blanding (east on Utah 95). Both towns are about 42 miles away from the park.

#### ***Regional Land Use/Visitor Facilities and Services***

##### ***NATIONAL PARK SERVICE LANDS:***

##### ***Canyonlands National Park:***

Canyonlands National Park contains 247,998 acres of rugged scenic canyons. Backpacking, boating, camping, hiking, picnicking, and sightseeing are some of the recreational opportunities provided by this outstanding natural resource.

##### ***Glen Canyon National Recreation Area (Lake Powell):***

Glen Canyon National Recreation Area includes Lake Powell. The park's 1.2 million acres offers magnificent

scenery and a variety of outdoor activities, including water sports.

Hovenweep National Monument:

Hovenweep National Monument consists of six groups of ruins spread across 440 acres of land in the Four Corners region of Utah and Colorado. There is a self-guiding trail and a small campground at the largest and most popular site.

*BUREAU OF LAND MANAGEMENT LANDS:*

The Bureau of Land Management currently manages approximately 1,776,601 acres of federally owned national resource lands within the San Juan Resource Area. This resource area is entirely located within San Juan County. About 614,490 acres are managed as special resource management areas, with an emphasis upon maintaining Recreation Opportunity Spectrum (ROS) primitive and semi-primitive, non-motorized class recreational opportunities. Nearly 611,310 acres are open to off-road-vehicle use. The BLM also manages 11 developed recreation sites throughout the county. Comprehensive visitor use data is not available. However, recreational use of the national resource lands has been steadily increasing over the last few years. Public access and use of the national resource lands are less rigorously controlled and regulated than public use of national park lands.

*U.S. FOREST SERVICE LANDS:*

Approximately 366,493 acres of the more than 1.3 million acres of Manti-LaSal National Forest are located in central and northern San Juan County.

Much of this resource is available for hiking, camping, fishing, hunting, and other outdoor recreation pursuits. Outdoor recreation is an important use of national forest lands. Recreational use of this resource is expected to increase in the future.

*STATE OF UTAH LANDS:*

Edge of the Cedars State Park:

This small park is on the western outskirts of Blanding, Utah. The main attraction is the Anasazi ruin located there. The park museum contains exhibits representing the different cultures that have existed in San Juan County.

Goosenecks State Park:

This small undeveloped area lies at the top of the escarpment overlooking the San Juan River, about 40 miles south of Natural Bridges National Monument near Mexican Hat. A proposal was recently submitted to the Bureau of Land Management to significantly enlarge and develop this area, including plans for a visitor information facility and a campground. A developed campground at this location, even though a significant distance from Natural Bridges, could incrementally reduce the camping demand and pressure on the park and the immediate area.

*PRIVATE LANDS:*

Fry Canyon, a small private development about 20 miles west of the park, has recently developed limited RV and tent camping areas, which should also incrementally reduce demand in the Natural Bridges area.

**Table 5: Comparative Visitation for Selected Parks in the Region**

Park	1981 Visits	1991 Visits (NPS) or 1988 Visits (State Parks)	Percent Increase
Natural Bridges Nat'l. Monument	60,131	125,356	108
Canyonlands Nat'l. Park	89,915	333,948	271
Glen Canyon Nat'l. Rec. Area	1,733,529	3,104,124	79
Hovenweep Nat'l. Monument	13,628	26,572	95
<i>Edge of the Cedars St. Park</i>	19,963	21,239	6

**STATE LANDS COMMISSION:**

The Utah State Lands Commission controls nearly a quarter of a million acres of land within the county. Most of this land is contained in non-contiguous isolated sections surrounded by federal and/or private lands. Some of this land is available for various outdoor recreation activities. A 1-square-mile section of state land borders the park on the east.

**Land-ownership**

The land inside the park is wholly owned by the United States. Legal jurisdiction is proprietary.

**ENVIRONMENTAL CONSEQUENCES****Impacts on Geology and Soils****NO-ACTION ALTERNATIVE:**

Existing use and maintenance of facilities such as roads, parking areas, picnic and camping areas, buildings, and underground utility systems would

result in minor continuing disturbance of adjacent soil, including the cryptogamic soils. Existing facilities and roads consist of 50.2 acres of impermeable surfaces, which is 0.67 percent of the total park acreage.

**PROPOSAL:**

Construction of proposed facilities and roads and alteration of existing facilities and roads would result in approximately 0.6 additional acres of impermeable or significantly altered surface. The total additional disturbed area would constitute less than 0.01 percent of the total park acreage. It is anticipated that no geologic features would be affected, and the excavation of bedrock would be avoided where feasible. An increase in impermeable surfaces would result in runoff into adjacent areas, possibly causing channelization and loss of soil. Methods for minimizing this soil erosion include re-vegetation of disturbed areas, and properly grading roads and surface drainage channels.



Temporary surface disturbance caused by construction would be revegetated. Construction activities would retain the natural slope as much as possible. Careful construction supervision and containment of ground-disturbing activities within well-defined construction sites would minimize the impacts adjacent to the new facilities. Reclamation of temporarily disturbed areas would be funded as part of the construction.

Overflow of campers not able to camp in the park onto Bureau of Land Management lands would continue to cause compaction and erosion of soils. To date, this has not caused permanent damage to the resources.

### ***Impacts on Prime and Unique Agricultural Lands***

#### ***NO-ACTION ALTERNATIVE:***

There would be no impact because there is no prime and unique agricultural land in the park.

#### ***PROPOSAL:***

There would be no impact because there is no prime and unique agricultural land in the park. Any existing agricultural land is remote and would not be affected.

### ***Impacts on Vegetation***

#### ***NO-ACTION ALTERNATIVE:***

Existing roads, trails, and development have permanently destroyed vegetation in the piñon-juniper and rimrock vegetation communities. These impermeable surfaces result in runoff into adjacent areas, which leads to natural species composition and density being changed and/or reduced. Some species are favored by additional runoff, but the growth of other xeric species can be hindered. Tree roots ex-

posed by increased erosion may result in mortality. There are no known impacts to the hanging gardens and riparian areas. The potential for destruction of these areas by a draw-down of the spring-fed aquifers is also not known.

#### ***PROPOSAL:***

Construction of facilities would result in the clearing of 0.6 acres of the piñon-juniper plant community—far less than 1 percent of approximately 4,200 total acres of piñon-juniper. The increase of impervious surface created by additional buildings, parking, and walkways would result in water draining to adjacent areas, which can change the vegetative composition, but is not expected to be detrimental to any plant species.

The effects on the hanging gardens and riparian vegetative communities caused by a possible drawdown of the aquifer are unknown, but would be determined by a study of the park's hydrologic features.

The gathering of firewood, including destruction of trees on BLM lands, would continue, due to the overflow of campers not able to camp in the park.

### ***Impacts on Water Resources***

#### ***NO-ACTION ALTERNATIVE:***

Impacts on the surface hydrology because of visitor use off of trails or around parking areas is believed to be insignificant compared to the amount that occurs naturally in the highly erosive environment of the park.

Impacts to subsurface hydrology are unknown. A study is proposed to determine the impacts from increases in visitation and park personnel on the aquifer, including any effects on natural springs and the hanging garden



plant community. For the near future, the volume of water use would remain close to the present volume and should not negatively impact the aquifer.

**PROPOSAL:**

Impacts to subsurface hydrology are unknown. A study would be conducted to determine the impacts of human use on the Cedar Mesa aquifer and natural hydrologic features, such as springs and hanging gardens. Water-saving practices would be implemented in staff and visitor facilities. For the near future, it is anticipated that the volume of use would remain close to the present quantity and not negatively impact the aquifer.

**Impacts on Water Rights**

**NO-ACTION ALTERNATIVE:**

Natural Bridges would be included in efforts with the State of Utah to conduct a water rights adjudication for the area east of Colorado River. The United States would be expected to eventually join in this process at a future date. Without knowledge of water rights, the park would not be able to cooperate to protect the water quality from future surrounding land use activities, thus impacts to the water quality would continue. These impacts would include increased fecal coliform counts in the water from adjacent grazing, increased turbidity in the pools, and leaching of minerals from mining activities in Elk Ridge drainages into White Canyon and its tributaries.

**PROPOSAL:**

There would be preventive measures in place to protect surrounding land use activities from affecting the water quality.

**Impacts on Floodplains and Wetlands**

**NO-ACTION ALTERNATIVE:**

During heavy rainfalls, the main stream channels flood. There are no facilities in the floodplain; therefore, facilities are not adversely effected by flooding. At present, neither park facilities nor visitor use degrade any of the beneficial attributes of floodplains or wetlands in the park.

**PROPOSAL:**

No development is planned for the floodplain and wetlands in the canyon bottoms; therefore, there would be no impact on these areas. It is not known how human use of the aquifer could affect the wetlands. The hydrologic study would address this issue.

**Impacts on Wildlife**

**NO-ACTION ALTERNATIVE:**

Because the headquarters and loop road development are not currently used as habitat for the larger mammalian species, there would be no additional impacts to them. Bird populations consisting of some passerines and smaller predacious birds, such as accipiters and small owls, could nest close to the facilities, and could therefore be affected.

**PROPOSAL:**

The General Management Plan proposal modifies 0.6 additional acres within existing developed areas. The headquarters and loop road development are not important habitat for the larger mammalian species; therefore, there would be no additional impacts to them. Smaller mammalian species and other small animals would be displaced in local areas, such as the expanded residential area. Bird popula-

tions consisting of some passerines and smaller predacious birds, such as accipiters and small owls, do not nest or breed in these populated areas. Therefore, the proposed action would affect these species to only a slightly greater extent than at present.

### ***Impacts on Threatened and Endangered Species***

#### ***NO-ACTION ALTERNATIVE:***

The peregrine falcon, bald eagle, and black-footed ferret could occur in the vicinity of the park. None of these species is dependent on Natural Bridges for habitat. The bald eagle is only transient, and occasionally preys on waterfowl at the sewage lagoon. Surveys of the park have recently documented successful nesting by one pair of peregrines. There have been no documented sightings of the black-footed ferret. It is believed that under the no-action alternative, there would be no impacts to these species. Consistent with the Endangered Species Act, given future discovery of any such species in other than a transitory mode through the park, the National Park Service would determine the extent and character of their presence and would take mitigative measures to protect them.

#### ***PROPOSAL:***

It is believed that under the proposal, there would be no impacts to the above-mentioned species. Consistent with the Endangered Species Act, given future discovery of any such species in other than a transitory mode through the park, the National Park Service would determine the extent and character of the presence of these species, and would take mitigative measures to protect them.

### ***Impacts on Wilderness Values***

#### ***NO-ACTION ALTERNATIVE:***

The major visitor use areas are away from the suitable wilderness area; therefore, it is believed that existing visitor use of the park does not impact wilderness values. There are no permanent structures, other than archeological sites, within the suitable wilderness area, and motorized vehicles are currently not allowed in the suitable wilderness area.

#### ***PROPOSAL:***

The suitable wilderness area would be managed as wilderness under the proposal; no facilities are proposed in or near the suitable wilderness area; and the major visitor use areas would be away from the suitable wilderness area. Therefore, the proposal is not expected to negatively impact wilderness values.

### ***Impacts on Air Quality***

#### ***NO-ACTION ALTERNATIVE:***

A continuation of current management practices could result in increased auto emissions as visitation increases. However, the amount of emissions would not be great enough to violate air quality standards.

#### ***PROPOSAL:***

Construction of buildings, parking areas, and other visitor facilities would temporarily increase air pollution, but levels would not be great enough to violate air quality standards. Construction dust can be controlled with the application of water or other approved dust palliatives.

### ***Impacts on Visual Resources***

#### ***NO-ACTION ALTERNATIVE:***

Existing visitor facilities within the developed areas (entrance station, visitor center, and overlooks) are visible; however, they do not obstruct the views of the scenic resources. The architectural styles of the facilities are compatible with each other and with the natural environment; therefore, there is little adverse impact on the visual resource.

The camping that occurs on adjacent BLM lands has impacted the scenic qualities in local areas, with a visible increase in trash, fire pits, and trampled vegetation.

#### ***PROPOSAL:***

Proposed development is minimal, and all would be architecturally designed to be compatible with existing buildings and the surrounding natural environment (see appended Facility Design Guideline). There would be no significant negative impacts on the visual resource.

Localized visual impacts on BLM lands (e.g., fire rings, informal roads) would continue to increase as use of these lands continue for camping. However, these effects would be addressed in the regional campground study, which will be coordinated with ongoing efforts of Canyon Country Partnerships in this area.

### ***Impacts on Natural Silence***

#### ***NO-ACTION ALTERNATIVE:***

The park would continue to gather and interpret necessary baseline data and monitor effects to natural silence.

#### ***PROPOSAL:***

The park would continue to gather and interpret necessary baseline data and monitor effects on natural silence. The park would minimize the effects to natural silence by networking with landowners to ensure that this resource is not affected by surrounding land management activities.

### ***Impacts on Cultural Resources***

#### ***NO-ACTION ALTERNATIVE:***

Existing human-caused impacts to the archeological resources are a result of visitor use. They include graffiti on rock walls, removal of stones, and weakening and destruction of prehistoric walls. Visitors walking around the campground and other public sites have the potential to destroy or disrupt Archaic, late Prehistoric, and Proto-historic period sites. There are no signs of impacts on historic resources.

#### ***PROPOSAL:***

The potential for impacts to archeological resources in the park would continue. However, it is believed that through improved interpretation and education of visitors about the value of these resources and the "leave-no-trace" concept that the amount of impacts would decrease. Additional proposed seasonal ranger staffing may help with archeological resource loss.

### ***Impacts on Ethnographic and American Indian Resources***

#### ***NO-ACTION ALTERNATIVE:***

There are no known American Indian resources within the park; therefore, there would be no known impacts. Consultation with American Indian groups would be continued to determine the existence of any significant



ethnographic resources and the effects upon them. All ethnographic surveys would be done as funds become available.

#### *PROPOSAL:*

Because there are no known contemporary American Indian resources within the park, there would be no known impacts. Consultation with American Indian groups would continue to determine the existence of any significant ethnographic resources and effects upon them. All ethnographic surveys would be done as funding becomes available.

#### *Impacts on Visitor Use*

##### *NO-ACTION ALTERNATIVE:*

The low staffing levels would perpetuate decreased interpretive services offered to visitors. This would result in a lower level of education of, and perhaps appreciation for, the park's resources. Visitor center media, the auditorium, and amphitheater would continue to be substandard, and there would not be enough staff to provide regularly scheduled evening programs and roving interpretation. As a result, visitors would receive mediocre interpretation, giving them little incentive to develop a better understanding of the park and its resources and little assistance in having a safe, enjoyable park experience.

The limited number of campsites, and the lack of group campsites, sites accessible to persons with disabilities, and the lack of campsites accommodating large vehicles would continue to inconvenience visitors, and perhaps shorten their visit, because they would have to leave the park and drive many miles to find overnight accommodations.

#### *PROPOSAL:*

Increased staff levels would increase the amount of, and quality of, interpretive information and programs available to visitors. The quality and accessibility of interpretive media and facilities would be improved under the proposal. Visitors would receive better interpretation of the park's geology, archeology, and natural history, and the relationships between them. Safety and resource protection information would be more readily available, and evening programs and roving interpretation would be provided more frequently.

A comfort station and accessibility improvements along Bridge View Drive would provide a more comfortable and convenient recreational experience for visitors.

The current limited number of campsites is an inconvenience to visitors because they have to leave the park and drive some distance to find overnight accommodations. However, when future sites are built, it should actually improve the situation. It is anticipated that more than 13 sites would be constructed in an area along the major tourist travel routes; therefore, even more visitors than those who currently are able to find a campsite would be able to camp in the area.

#### *SOCIOECONOMIC IMPACTS*

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##### *NO-ACTION ALTERNATIVE:*

Economic benefits of current park operations are described in the section on Affected Environment. Total sales from the park's operating expenditures is about \$1,475,485 annually. Total tax revenue increase amounts to \$108,317 annually. Operations and use of the park result in about 30 jobs.

Economic impacts of the park to the region are not particularly significant. Existing patterns of travel and retail sales would continue, except for increases projected by present visitation trends. The park would continue to contribute to the regional economy by providing jobs and purchasing goods and services. Payroll for the existing staff is approximately \$260,000 annually.

It is estimated that \$5,592,346 in tourist expenditures for 1994 can be attributed to the park. Natural Bridges is not a destination park, but if visitors extend their stay in the region by the average length-of-stay at the park (2.25 hours), then each visit represents almost one-tenth of a visitor day (2.25 hours/24 hours per visitor day). With visitation of 66,959 in 1995, multiply the one-tenth of a visitor day times the estimated \$87.73 per visitor day spent on food, lodging, transportation, and so forth, and the contribution to the regional economy is obtained.

Under the no-action alternative, there would be no economic benefits to the region occurring from construction-related expenditures.

#### **PROPOSAL:**

The park would continue to make long-term contributions to the local and regional economy by providing jobs, purchasing goods and services, and attracting increasing numbers of travelers. In addition, more than \$3,569,982 would be spent on renovations within the park. These construction activities would provide short-term economic benefits to the regional economy.

Increasing visitation would require additional park staff. Proposed staff increases would add \$135,000 to the

annual payroll, bringing the total annual payroll to \$395,000. Sales revenues from park tourism could result in direct sales of about \$620,918 annually to the local economy. An estimated annual park budget of \$500,000 could result in total sales, considering indirect and induced multipliers, of about \$6,732,460 annually. When implementation of the construction project occurs, a short-term gain of an additional 135 jobs would occur. An increase of \$494,179 in tax revenues would occur.

#### **SHORT-TERM AND LONG-TERM EFFECTS OF THE PROPOSAL**

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Compared to a land base of more than 7,000 acres in the park, land-use consumption would increase by 0.6 acres. This additional use of space would be dedicated to the protection and interpretation of the greater area of the park. The purpose is to improve long-term management and to provide better protection of the environment and an enhanced visitor experience. Interpretation would be more effective and managers would be more effective in carrying out long-term management of the park.

#### **IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES RELATED TO THE PROPOSAL**

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Some archeological sites are subject to irreversible damage because of vandalism and loss of contextual relationships between objects that comprise a site. When objects are removed from a site, or moved within a site, this irreversible damage affects the potential for future archeological research to fully derive all scientific knowledge from that particular site.

Increased visitation will tend to increase the amount of damage to archaeological sites and the loss of artifacts no matter what protective message is provided through interpretation and education.

### ***CUMULATIVE EFFECTS DUE TO THE PROPOSAL***

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Natural Bridges National Monument attracts an increasing number of visitors each year, many of whom would like to camp, but cannot in the limited space provided at the park. The proposal not to increase camping, and eventually remove camping from the park, would only exacerbate the overflow camping on Bureau of Land Management lands outside the park, resulting in additional impacts there.

At present, 50.2 acres of the 7,461-acre Natural Bridges National Monument contain roads, buildings, and related development and use supporting the visitor experience. The proposal would commit an additional

0.6 acres to these purposes, resulting in a total of 50.8 acres, or 0.7 percent of the total land base. The proposal includes conscious decisions not to expand camping within the park, and not to expand parking areas beyond the limits of areas already disturbed—especially in environmentally sensitive rim drive areas. Increasing travel to the park and important elements of the transportation study and regional campground study could result in additional needs for parking and campgrounds and resultant consumption of additional land areas in the vicinity of Natural Bridges.

The proposal does not suggest expansion of the boundary, because the agreement to join with the U.S. Forest Service and the Bureau of Land Management in mitigating visual effects of land-management practices of those agencies is on a case-by-case basis. The types of impacts that would be mitigated include visual effects, water quality, and loss of soil.



## CONSULTATION AND COORDINATION

### SUMMARY OF PUBLIC INVOLVEMENT

A news release announcing the start of this general management planning process was issued on January 30, 1991.

In February 1991, mail-back brochures were sent to the general public, other agencies, applicable land managers, and interested groups. This brochure informed them that the NPS was beginning a management and development planning process for the park, and requested their input on what concerns they had about the future of the park. Responses during the scoping period were received from 33 individuals and 14 organizations. A few of the respondents addressed the need for additional staffing to better meet visitor services and resource protection requirements. Some of the respondents offered general impressions of the plan, the park, or the National Park Service. Others commented on items that the planning team considered operational requirements or otherwise outside the scope of the General Management Plan. Examples of these concerns are acquiring funds for plan implementation, rare plant protection, and facility closures.

A notice of intent to prepare an Environmental Impact Statement was published in the *Federal Register* on March 22, 1991.

Four American Indian tribes (Navajo Nation, White Mesa Ute Band, Hopi Tribe, and Ute Mountain Ute Tribe) were contacted during the scoping period. Three of them did not specifically reply. The Navajo Nation responded

to the concerns of interpretation of the Navajo culture and what impacts would occur from boundary enlargement. Written responses were received from the Historic Preservation Department and the Director of Navajo Parks and Recreation. Meetings were held with officials from the Oljato Chapter and Utah Navajo Development Council board members. Findings revealed that there are no known places of traditional significance inside the current park boundaries; however, there are areas in close proximity that have been traditionally used for subsistence and religious practices.

Most of the respondents expressed concern about the level of development that would be proposed in the plan. Comments ranged from those who favor decreased development to those who favor maximum increases in the development of facilities and services. Many respondents addressed the need for increased cooperation with the Bureau of Land Management, the U.S. Forest Service, and the State of Utah to serve the overall visitor experiences and protect the park's resources.

As required by section 106 of the National Historic Preservation Act, the Draft Environmental Impact Statement/General Management Plan/Development Concept Plan and the appended Plan for Interpretation have been provided to the Advisory Council on Historic Preservation and the Utah State Preservation Officer.

On October 1, 1990, the National Park Service sent a letter to Mr. Max Evans (Director and State Historic Preserva-

tion Officer, Utah Historical Society) and to the Advisory Council on Historic Preservation providing them with a copy of the draft task directive for development of a General Management Plan, Natural Bridges National Monument, Utah, and soliciting review and comment.

National Park Service records indicate that no comment was received from either the Utah State Historic Preservation Office (SHPO) or the Advisory Council. On March 8, 1991, the National Park Service sent identical letters to the Utah State Historic Preservation Office and the Advisory Council on Historic Preservation, providing each with a copy of the approved task directive for development of a General Management Plan, Natural Bridges National Monument, Utah. The response from the Utah SHPO was received by Natural Bridges NM on December 1, 1995, and is included in the Final comment and response section.

The Draft GMP/DCP EIS was made available to the public on November 17, 1995. Comments were originally requested by January 15, 1995; the comment period was later extended to February 16, 1996. Public meetings were held February 12, 13, and 14, 1996 at Moab, Blanding, and Mexican Hat, Utah.

## ***LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS TO WHOM COPIES OF THE STATEMENT WERE SENT***

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### ***Native American Indian Tribes:***

#### ***NAVAJO NATION***

- Historic Preservation Department
- Director - Navajo Parks and Recreation
- Oljato Chapter
- Utah Navajo Development Council

#### ***\*HOPI TRIBE***

### ***Federal Agencies:***

#### ***DEPARTMENT OF INTERIOR***

- Bureau of Land Management, Utah State Office
- Moab District Office
- San Juan Resource Area Office
- National Park Service, Utah State Coordinator
- Fish and Wildlife Service
- Bureau of Indian Affairs

#### ***DEPARTMENT OF AGRICULTURE***

- Forest Service, Manti-LaSal National Forest Supervisor's Office
- Moab/Monticello District Office

#### ***ADVISORY COUNCIL ON HISTORIC PRESERVATION***

#### ***\*U.S. ENVIRONMENTAL PROTECTION AGENCY***

#### ***DEPARTMENT OF TRANSPORTATION***

- Federal Highway Administration

**State Agencies:**

**\*UTAH STATE HISTORIC  
PRESERVATION OFFICE**

**UTAH DEPARTMENT OF NATURAL  
RESOURCES**

**EDGE OF THE CEDARS STATE PARK**

**\*UTAH DEPARTMENT OF  
TRANSPORTATION**

**COLLEGE OF EASTERN UTAH,  
BLANDING CAMPUS**

**Local Agencies:**

**\*SAN JUAN COUNTY COMMISSION**

**SAN JUAN COUNTY ECONOMIC  
DEVELOPMENT AND TOURISM  
BOARD**

**CITY OF BLANDING**

**BLANDING CHAMBER OF  
COMMERCE**

**CITY OF MONTICELLO**

**Organizations:**

**\*NATIONAL PARKS AND  
CONSERVATION ASSOCIATION**

**SOUTHERN UTAH WILDERNESS  
ALLIANCE**

**\*WESTERN ASSOCIATION OF LAND  
USERS**

**Individuals:**

**\*OWEN SEVERANCE, UTAH**

**\*JEFFREY D. FISHER, P.C., MISSOURI**

**\*JIM MASON, MINNESOTA**

**\*AIDA PARKINSON, CALIFORNIA**

**MELVIN J. FROST, ARIZONA**

**\* Comments received on the DEIS**





# PREPARERS

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## PLANNING TEAM

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### **Steve Chaney,**

Park Superintendent, Natural Bridges National Monument. B.S. Agriculture. Experience includes Park Management, Natural Bridges National Monument (2 years); Resource Management Specialist at Buffalo National River and Mammoth Cave National Park (12 years); Chief of Resource Management, Rocky Mountain Region (2 years). Responsible for development of interagency issues, public involvement, and decisions on proposals.

### **Cathy A. Sacco,**

Landscape Architect, Team Captain, Rocky Mountain Region, National Park Service. B.S.L.A. Landscape Architecture, M.B.A. Masters of Business Administration. Experience includes Division of Planning and Compliance, Rocky Mountain Region, National Park Service (2 years); Landscape Architect, private sector planning and landscape architectural firms (6 years). Responsible for viewshed analysis, visitor use, general development/development concepts, plan implementation, development priorities and costs, facility analysis.

### **Allen Hagood,**

Park Planner and Geologist, Formerly Central Team, Denver Service Center, National Park Service. B.S. Geology, University of Redlands; M.S. Geology, University of Oregon. Experience includes 9 years as a Supervisory Park Ranger and Interpreter at Lake Mead,

Zion, Flaming Gorge, and Dinosaur; and 20 years as an Environmental Specialist, Park Planner and Project Manager in the Branch of Planning, Central Team, Denver Service Center. Responsible for overall coordination and boundary issues.

### **John Austin,**

Resource Economist, Central Team, Denver Service Center, National Park Service. B.S. Geology; Master's in Forestry Management and Economics. Experience includes 18 years as Resource Economist for Central Team, Denver Service Center, National Park Service. Responsible for projections of potential demand.

### **Lee Bennett,**

Former District Ranger, Monticello Ranger District, Manti-LaSal National Forest, U.S. Forest Service. B.A. Anthropology. M.A. Anthropology. Experience includes College Instructor in Anthropology (8 years); Archeological Consulting (5 years); Forest Archeologist, Payette National Forest, ID, U.S. Forest Service (7 years); District Ranger, Monticello Ranger District, Manti-LaSal National Forest, U.S. Forest Service (4 years).

### **Linda Carlson,**

Former Editor, Rocky Mountain Region, National Park Service. B.A. Sociology, Purdue University. Experience includes Division of Planning and Compliance, Rocky Mountain Region, National Park Service (5 years); Freelance Writing/Editing (5 years);

Correctional Counselor/Parole Officer, Federal Correctional Institution, Englewood, Colorado, Bureau of Prisons, Department of Justice (2 years); Program Assistant, Rocky Mountain Region, National Park Service (3 years). Responsible for cover sheet, summary, table of contents, purpose and need for the plan, legislative and administrative constraints, alternatives considered but rejected, future plans and studies, summary of alternatives/impacts, list of preparers, contributors, institutional consultants, bibliography, index, and general editing.

***DeNise Cooke,***

Former Park Superintendent, Natural Bridges National Monument, National Park Service. B.S. Natural Resource Management. Experience includes Park Management, Natural Bridges National Monument (2 years); District Ranger, Tuskegee Ranger District, U.S. Forest Service; Forester, Mt. Hood, Siuslaw, Okanogan, and Jefferson National Forests, U.S. Forest Service (12 years). Responsible for initial development of proposals.

***Nancy Coulam,***

Archeologist, National Park Service, Southeast Utah Group, Moab, Utah. B.A. Archeology from University of Utah, and M.A. and Ph.D. Archeology from Arizona State University. Eighteen years of archeological experience in Utah. Responsible for archeological sections.

***William T. Cunningham,***

Former Facility Manager, Southeast Utah Group, Canyonlands National Park. Experience includes 29 years with the National Park Service; 21 years as Chief of Maintenance of a

park facility. Responsible for road evaluation study.

***Craig Hauke,***

Natural Resource Specialist, Southeast Utah Group, National Park Service. B.S. Wildlife Management. Experience includes Biologist, Big Thicket National Preserve (2 years), Resource Management Ranger, Mount Rainier National Park (3 years), Terrestrial Resource Technician, Biscayne National Park (2 years). Responsible for sections on natural resources, impacts to natural resources and mitigation of impacts to natural resources.

***Karen M. McKinlay-Jones,***

Former Chief of Interpretation, Resource Management, and Visitor Protection. B.S. Natural Resources Management. Experience includes Volunteer, Golden Gate National Recreation Area (2 years); Park Ranger, Pinnacles National Monument (4 years); Chief Interpretation, Resource Management and Visitor Protection, Natural Bridges National Monument (4 years). Responsible for Visitor Use and Protection, Interpretation, Impacts on Visitor Use, Interpretive Prospectus, and Wilderness Suitability Study.

***Lori Kinser,***

Visual Information Specialist, RMR-PP. Experience includes Division of Planning and Compliance, Rocky Mountain Region, National Park Service (18 years as primary provider of graphics support). Responsible for production of most graphics and desktop publishing.

***Richard Lichtkoppler,***

Resource Economist, Branch of Planning, Central Team, Denver Service Center, National Park Service. B.S.



Business Administration, M.S. Natural Resources, Ph.D. Resource Economics. Experience includes Branch of Planning, Central Team, Denver Service Center, National Park Service (May 1991 through present); Division of Socioeconomic Studies, WASO, National Park Service (12 years). Responsible for socioeconomic analysis and related contributions.

***Thea Nordling,***

Former Interpretive Planner, Division of Interpretation, Rocky Mountain Region, National Park Service. B.A. English. Experience includes positions as Curator Assistant, Yellowstone National Park (5 years); Chief of Interpretation, Great Sand Dunes National Monument (3 years); Park Ranger and District Interpreter, Canyonlands National Park (11 years). Responsible for information/orientation, interpretation of resources, portions of visitor services, health and safety, program and facility, impacts on visitor use, and Interpretive Prospectus.

***Ken Rhea,***

Former Associate District Manager, Moab District Office, Bureau of Land Management. B.S. Range Management. Experience includes Soil Conservation Service, MT (1 year); Area Manager, Mile City District, MT, Bureau of Land Management (14 years); Area Manager, Worland District, WY Bureau of Land Management (4 years); Chief, Branch of Planning and Environmental Coordination, State Office, WY, Bureau of Land Management (4 years); Staff, Branch of Planning and Environmental Coordination, WASO (4 years); Associate District Manager, Moab District Office, Bureau of Land Management (12 years).

***Michael Snyder,***

Associate Regional Director, Planning and Resource Preservation, Rocky Mountain Region, National Park Service. B.L.A. Landscape Architecture. Experience includes Division of Planning and Compliance, Rocky Mountain Region, National Park Service (7 years, 4 as chief); Landscape Architect, Shoshone and Medicine Bow National Forests, USDA-Forest Service (7 years); Planner, Kansas Park and Resource Authority. Responsible for regional coordination.

***Larry Thomas,***

Chief, Resource Management, Southeast Utah Group (Former), National Park Service. B.S. Geography. National Park Ranger for 21 years, Management Assistant 3 years, Resource Management 4 years.

***Jim Dougan,***

Chief Ranger, Natural Bridges National Monument, B.S. Outdoor Recreation, M.A. Counseling Psychology. Experience includes Chief of Interpretation, Resource Management and Visitor Protection, Natural Bridges National Monument (4 years); Operations Specialist, U.S. Fish and Wildlife Service, Columbia National Wildlife Refuge (2 years); Namakan District Naturalist, Voyageurs National Park (4 years). Responsible for park operations.

***Robert Sontag,***

Historian/Editor, Rocky Mountain System Support Office. B.A. History. Experience in park preservation and cultural resource management issues attained while working for the former regional office as a historian tech/historian for the past four years. Recently, has been working as a

Writer/Editor for the Rocky Mountain System Support Office, planning team.

***Wenonah Skye,***

Outdoor Recreation Planner, Intermountain Field Area, Rocky Mountain System Support Office, Stewardship and Partnership—Planning, National Park Service (2 years), B.S. Recreation Resources Management. Experience includes Outdoor Recreation Planner—U.S.D.A. Forest Service, Chippewa National Forest (3 years) and the Huron-Manistee National Forest (1 year).

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**CONTRIBUTORS**

***Adrienne Anderson,***

National Park Service, Cultural Resources Program Leader, Colorado Plateau System Support Office

***Debra Frye,***

Landscape Architect, National Park Service, Colorado Plateau System Support Office

***Rudy Lobato,***

Architect, National Park Service, Rocky Mountain System Support Office

***Jayne Belnap,***

Biologist, National Biological Survey, Moab, Utah

***Jerry Budwick,***

Federal Highways Administration, Lakewood, Colorado

***Dale Cannon,***

Chief of Maintenance, Natural Bridges

***Walter Dabney,***

General Superintendent, Southeast Utah Group

***Michael Duwe,***

Former Environmental Protection Specialist, Rocky Mountain Region

***Larry Frederick,***

Former Chief, Visitor Information and Interpretation, Canyonlands National Park

***Duane Holmes,***

Leader, Conservation Assistance Programs, National Park Service, Rocky Mountain System Support Office

***Carla Kelly,***

Navajo Nation Historian, Window Rock, Arizona

***Dave Morris,***

Former Assistant Superintendent, Southeast Utah Group

***Harry Nuce,***

Former Electrical Engineer, Denver Service Center

***Francis Shorty,***

Coordinator, Navajo Nation, Oljato Chapter

***Les Siroky,***

Architect, National Park Service, Rocky Mountain System Support Office

***Quentin Smith,***

Former Chief, Branch of Utility Design and Technical Support, RMR-ME

***Christopher Theriault,***

Geographic Information Specialist, National Park Service, Colorado Plateau System Support Office

**Christine Turk,**  
Planning and Environmental Quality  
Program Leader, Colorado Plateau  
System Support Office

**Harvey Wickware,**  
Former General Superintendent,  
Southeast Utah Group

#### ***INSTITUTIONAL CONSULTANTS***

**Advisory Council on Historic Preser-  
vation, Denver, CO**

**Canyonlands Natural History Asso-  
ciation, Moab, UT**

**Harpers Ferry Center, Harpers Ferry,  
WV**

**Historic Preservation Team, Former  
Rocky Mountain Regional Office,  
NPS**

**Midwest Archeological Center,  
Lincoln, NE**

**San Juan County Economic Devel-  
opment and Tourism Board, Utah**

**San Juan County Commission, Utah**

**Blanding Chamber of Commerce,  
Blanding, Utah**

**Socioeconomic Studies Division,  
WASO-TNT, National Park Service**

**Utah Historic Preservation Office,  
Salt Lake City, UT**

**U.S. Bureau of the Census**





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### ***Kramer, Karen***

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### ***National Parks and Conservation Association***

1988 Boundary Study - Natural Bridges National Monument.

### ***Peterson, David***

1990 Of Wind, Water and Sand: The Natural Bridges Story, Canyonlands Natural History Association.

### ***State of Utah***

1990 San Juan County Economic Facts, Department of Community and Economic Development.

### ***U.S. Department of Agriculture, U.S. Forest Service***

ND Land and Resource Management Plan (Forest Plan) for the Manti-LaSal National Forest.

### ***U.S. Department of the Interior, Bureau Of Land Management***

1987 San Juan Resource Management Plan, Proposed Resource Management Plan/Final Environmental Impact Statement, Volume 1. San Juan Resource Area, Moab District.

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### ***U.S. Department of the Interior, National Park Service***

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1990 Statement for Management, Natural Bridges National Monument. Natural Bridges National Monument, Utah.

1990 The Wild and Scenic Rivers Act through September 30, 1990. Park Planning and Protection Division, Washington Office.

1991 Natural Bridges Annual Statement for Interpretation and Visitor Services, 1990 and 1991.

1991 Resource Management Plan, Natural Bridges National Monument. Natural Bridges National Monument, Utah.

1990 Statement for Management, Natural Bridges National Monument. Natural Bridges National Monument, Utah.

### ***Utah Wilderness Coalition***

ND Wilderness at the Edge, A Citizen Proposal to Utah's Canyons and Deserts.





## APPENDIXES

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### ***APPENDIX A: PUBLIC AND OTHER AGENCY COMMENT AND RESPONSE***

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There were 15 responses and 28 comments received on the Draft General Management Plan/Development Concept Plan/EIS. Letters from Tribal governments, federal governments, state governments, and local agencies are reproduced with comments marked with brackets and a response to comments following. All other letters that raised substantive comments or raised clarity issues are also reproduced.

## **Blanding Public Meeting**

**General Management Plan Public Meeting Notes**  
**Blanding Public Library**  
**February 13, 1996**

Attendants: Randee Bayles of the Blanding City Council, Harold Lyman of the Blanding Chamber of Commerce, Gail Johnson of the Western Association of Land Users, Owen Severence, Gary Guymon of the San Juan County Historical Commission and the Blanding Chamber of Commerce, and Bret Hosler of the City of Blanding.

NPS Attendants: Steve Chaney, Jim Dougan, Chris Nickel, and Amy Ireland.

### **Process:**

There was some concern expressed by Randee Bayles as to the beginning of the scoping process in 1991 and whether the local community had been notified. Harold Lyman mentioned that NABR had hosted a management assessment meeting which directly correlated to the Draft GMP. Chaney added that the conclusions of the management assessment were part of the draft GMP (even though that part of the process was not required by NEPA).

### **Camping:**

There was a question as to the future of the existing campground. Chaney responded that it will stay in use until other camping is made available and at that time it will be reassessed. Possible uses include a day-use area or a group camping area. There was a suggestion to chain the school land north of the entrance road and use it to develop a new campground. There was also a suggestion to locate a campground near the junction of highways 95 and 276 where a pull off has been used as a primitive campground in the past.

Concern was expressed by Gail Johnson that overflow campers are having an adverse effect on adjacent BLM lands such as the Deer Flat Road since the old overflow camping area (near the junction of highways 275 and 95) has been blocked off. Chaney explained that the old overflow site had been spreading and impacting a greater area. In addition, overflow camping right by the road detracts from the scenic entrance drive. He also mentioned that there was an agreement with the BLM to use the gravel storage area at the junction of highways 95 and 261 as an overflow site in the interim. Rangers have been directing overflow campers to

this area and not to the Deer Flat Road so this should lessen the impact of dispersed camping.

Gary Guymon suggested that we could keep money in the local community by having more camping in Blanding and that developing more camping on Cedar Mesa might compete with local business.

The Viewshed:

Bayles and Johnson feel that the GMP will restrict their potential to develop within the viewshed.

Bayles stated that the park mission seems to have changed over the years. Originally 120 acres were set aside to protect three bridges. He felt the viewshed protection was a land grab to gain more control over the surrounding area.

Chaney explained that viewshed protection as outlined in the GMP was an alternative to increasing the park boundary as NPCA had recommended or having buffer zones. The viewshed shows the areas NABR is concerned about. We have the tools to protect this area through BLM management and cooperation between agencies.

Bayles asked why we need to include viewshed protection in the GMP since these tools already exist. Chaney responded that this is the area outside the monument that concerns us. Since we would be involved in any discussion of development that might affect the viewshed, it would not be completely honest to leave it out of the GMP.

Bayles remarked that he felt development is as beautiful as a natural area. He stated 'There's nothing prettier to me than a mine.' Chaney discussed the possibility of signs along the entrance road to interpret the mines that are visible from the road. Johnson disagreed. She feels that pointing out a mine will encourage more visitors to try to get to it. This could cause resource damage and possible danger to visitors. The more we develop in general the more people it attracts and the more damage it causes. She stated that the reason NABR has been so well protected is largely due to its isolation.

There was a question as to what it is that we want to protect the viewshed against in the future. Chaney responded that we can't know the future. In the 1930's Zeke Johnson couldn't have



predicted that uranium would be discovered and that the mines would affect the viewshed.

Gail Johnson was concerned that there is a double standard for what the Government can do and what the regular citizens can do and that by protecting the viewshed we are locking up potential development in the future (mines) and preventing people from the potential to make a living. } 1

Suggestion that for future presentations Steve should have a map and slides of the viewshed in question so people could know specifically which areas would be affected.

#### Wild and Scenic River Designation:

There was a question as to how a dry stream bed can be a 'wild and scenic river'. Chaney said he'd had the same question at first but found that having an intermittent flow does not preclude an area from being eligible for designation as a wild and scenic river. There was a question as to what having that designation means for an area. For an area already within a national monument, it doesn't really change things. There was some confusion as to why NABR did this eligibility study and if it would ultimately affect areas outside the monument. Steve explained that we were required to do the study by congress and that the area outside the monument is the BLM's responsibility and won't be affected by the findings of the NABR study.

#### Removal of Picnic Area:

Bayles stated that our picnic area is a beautiful spot. Chaney responded that it doesn't get much use due to the lack of shade and that the steep stairs to the second table are an accessibility problem. Tables outside the visitor center in the shade get much more use. They are also near water and restrooms. We may add some picnic tables to loop areas such as the Kachina Bridge parking area (where we are planning to add restroom facilities).

#### Housing:

There was general agreement that the community supports having necessary housing development at NABR. There was a question whether the BLM would be charged rent if their employees used NABR housing. Chaney responded that they would be charged.

It was asked what NABR does with its solid waste. Chaney answered that currently it is hauled by a contractor out of Moab. NABR is negotiating with ARAMARK, the concession from Glen Canyon to haul solid wastes to White Mesa.

It was asked whether the new duplex will be modular or built. Chaney answered that it will be whatever is cheapest, probably a combination

There was concern that NABR gives much of its business to Moab and other areas rather than Blanding. Chaney responded that it is difficult to get folks in Blanding to bid on NABR projects, largely due to the fact that many of the services needed aren't found in Blanding.

#### **Concessions:**

Bret Hosler asked about having concessions in the Monument. Chaney explained that we do have a concessionaire. CNHA sells books and conveniences such as film in the Monument. Hosler suggested that cold pop, film and Native American art for example could be sold within certain guidelines and bring more money into the local community. Chaney explained that this would be allowable regardless of the outcome of the GMP. Hosler wanted to have this in writing. Chaney responded that he believes that type of statement already exists in the interpretive prospective.

**1.** It is important to understand that an area identified as a viewshed can consist of a combination of land ownerships, both public and private. Once a viewshed has been identified there are no legal constraints associated with such designations unless they should encompass an area that is already encumbered by law such as legislatively established wilderness areas. Therefore, designation of a viewshed would not lock up or preclude land management or development related type of activities. So why identify viewsheds? The purpose in identifying viewsheds is nothing more than an effort to first identify areas that are visually important and sensitive to change. Secondly, once these areas have been identified, they become the basis to alerting all interest as to how important such lands are and then working together to minimize potential impacts of future action that might affect the visual quality within the viewshed. With regard to private lands beyond the park boundary, such participation in working together would be strictly voluntary.

**General Management Plan Public Meeting Notes**  
**Mexican Hat Elementary School**  
**February 14, 1996**

Attendants: Steve Keller, Oscar Begaye and Harlin Harrison Sr.

NPS Attendants: Steve Chaney, Jim Dougan, and Amy Ireland.

Keller asked if there was any chance of the existing mines being cleaned up. Chaney answered that it's unlikely, but the mining laws have changed such that we should be able to protect the scene from further impacts.

Harrison asked if there was any chance that NABR would be closing. Chaney responded that NABR's funding has remained relatively stable, although due to cost of living and benefit increases we are able to do less with the same amount of money. If budget cuts continue, we may have to close the monument for a few months in the winter.

Harrison expressed concern as to whether woodcutting on Cedar Mesa will be prohibited in the future. Chaney answered that woodcutting is prohibited within the monument and the surrounding area is managed by the BLM. They could not shut off woodcutting unless they went through a public input process like this one.

Begaye, a teacher who brings school groups to the Monument, stated that the addition of a restroom facility on the loop is a good idea. He also suggested enlarging the restroom facilities by the visitor center and adding more space for buses in the parking areas. Begaye commented that it takes a while for all the students to get water with only the one working fountain. Otherwise he feels the Monument is well-taken care of and that the trails are well marked.

Chaney responded that we have proposed in the GMP to rework the visitor center parking area to help with larger vehicles. He also mentioned that we would like to do more outreach to the local schools but that it's difficult with shrinking resources.

There was a question as to where the monument hauls its trash. Chaney answered that it goes to White Mesa.



Begaye asked if we lock the gate at night. Chaney responded that generally we do. There is no backcountry camping allowed in the monument. The canyons are narrow and could easily become scarred by camping spots and fire pits. We don't mind having people out to star gaze etc. but if the gate is left open people will camp out of bounds.

Keller remarked that NABR keeps a bright yellow light on all night outside the maintenance building which is visible from the road. He suggested that we change to one with a switch. Chaney responded that when we can afford to replace it we will put in an incandescent light with a motion sensor. We do want to preserve the night skies at NABR.

Begaye asked about emergency services and telephones at NABR. Jim Dougan responded that with the new pay phones outside the visitor center you just have to dial 911. This goes to the San Juan County Sheriff, and if it is something that can be taken care of by the Natural Bridges law enforcement rangers or EMT's the sheriff's office will alert NABR staff.

Begaye asked where the closest other NPS personnel are located. Jim responded that they are at Halls Crossing and Hite Marina (both about 50 miles away).

Keller said the GMP seemed to cost a lot of money. He suggested that since most NABR employees are seasonal and are outdoorsy, they don't need luxury accommodations. He felt we could put in a kitchen and a shower room and have seasonals live in tents.

Chaney responded that actually most NABR employees are permanent. This summer we will only be hiring two seasonals, but visiting resource management personnel do often camp out and we are considering putting in a shower house for them.

Keller remarked that in 1987 NABR had only two seasonals with no Chief Ranger and that everything went smoothly that season. He questioned why we keep adding more employees and spending more money when he believes that we could get by with less. Chaney responded that we actually have fewer full time employees than we did 15 years ago and that for the last three years our FTE's have gone down. We owe visitors more than just to collect their fees.

With visitation up to 150,000 a year, we need a larger staff to accommodate visitors and to provide them with necessary law enforcement, emergency medical services and interpretation.

Keller felt that the parks should not be for entertainment and that the rangers shouldn't be putting on a show for the visitors. Chaney responded that our mission as stated in the Organic Act is to preserve and protect the resource and to provide for visitors' enjoyment of the resource. While we don't want to become Disneyland we need to help people understand the resource so they care about it and treat it with respect.

Keller repeated that a lot of money is being spent and asked what was meant by substandard housing. Chaney responded that the only housing at NABR that is considered substandard is the old maintenance trailer, but that we do have one permanent employee still living in an efficiency apartment and that it is difficult to recruit employees unless there is adequate housing.

Keller suggested that we paint the backs of traffic signs black to cut down on the glare at night. Jim Dougan replied that we had done that from the entrance road into the park and that we have worked with UDOT and removed a number of extraneous signs from the entrance road as well.

American Indian Tribes

THE

HOPI TRIBE



Ferrell Secakuku  
CHAIRMAN

Wayne Taylor, Jr.  
VICE-CHAIRMAN

February 8, 1996

Steve W. Chaney, Superintendent  
Natural Bridges National Monument  
Box 1  
Lake Powell, Utah 84533-0101

**RE: Natural Bridges National Monument General Management/Development Concept Plan Draft Environmental Impact Statement.**

Dear Mr. Chaney,

The Hopi Tribe has received and reviewed the Natural Bridges National Monument General Management/Development Concept Plan Draft Environmental Impact Statement provided by your office. We appreciate the opportunity to participate in the process of revising this Plan and hope that the Tribal suggestions will be incorporated in order to more effectively manage and preserve the resources in the Monument.

In general, the Hopi Tribe supports the goals of the proposed alternative; any actions that furthers the preservation of "... natural and cultural environments; to permit biological, geological, and other natural processes to continue with minimum of human disturbance ..." and that provide visitors with a better "... understanding of the significance of park resources." is considered appropriate. Several suggestions are presented below that the Hopi Tribe recommends to the Park Service as a means of better achieving the stated goals.

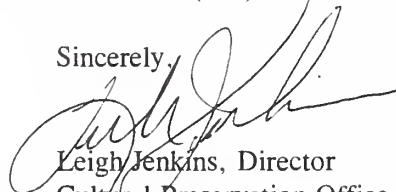
As cultural resources are one of the two primary purposes of the park, the Hopi Tribe

feels that an emphasis should be placed on identifying, documenting, and interpreting the cultural resources. Integral to this effort should be the completion of an ethnographic assessment in order to aid in the identification, evaluation, and interpretation of the park resources. The need for this is noted on pages 11, 31, and 62 of the Draft EIS. In order for this effort to achieve the most complete results, it is imperative that participating tribes be integrally involved in formulating and guiding the research. The Hopi Tribe has undertaken ethnographic research for other projects and is fully capable of designing a research effort that can be mutually beneficial while maintaining the necessary restrictions on sensitive or esoteric information that should not be released to the general public. Without the direct participation of the Hopi Tribe, it is unlikely that an adequate assessment of Hopi traditions into Natural Bridges National Monument can be completed in a timely manner. } 2

Currently, it is known that at least 7 Hopi clans have traditions into southeastern Utah, including Rattlesnake, Sand, Lizard, Flute, Deer, Greasewood, Bow, and Reed clans. It is likely, therefore, that there are areas of traditional significance that would be identified in the Monument. Work on other projects has identified important, named places both to the north and south of Natural Bridges and may identify similar areas within the Monument.

The Hopi Tribe looks forward to future cooperative ventures with Natural Bridges National Monument. Should you have any questions regarding our comments, or require additional information, do not hesitate to contact me at (520) 734-6636.

Sincerely,



Leigh Jenkins, Director  
Cultural Preservation Office  
Hopi Tribe  
P.O. Box 123  
Kykotsmovi, Arizona 86039

**2.** We agree. Ethnographic surveys have not been completed for Natural Bridges National Monument. The surveys will be completed as soon as funding becomes available. We will include this information in the Ethnographic Resources section of the document. The Hopi Tribe will also be included on our mailing list and consulted in the future on cultural and ethnographic resource issues.



FederalUNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION VIII999 18th STREET - SUITE 500  
DENVER, COLORADO 80202-2466

DEC - 7 1995

Ref: EPR-EP

Steve W. Chaney, Superintendent  
Natural Bridges National Monument  
Box 1  
Lake Powell, Utah 84533-0101RE: Draft - Environmental Impact  
Statement/General Management Plan for  
Natural Bridges National Monument

Dear Mr. Chaney,

According to our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act (CAA), the Region VIII office of the Environmental Protection Agency (EPA) has reviewed the DEIS for the above referenced project.

The EPA appreciates the focus on protecting the fragile environment of the Monument. We endorse the proposed hydrological study to evaluate potential impacts to springs and the hanging gardens from facility development. No irreversible or irretrievable actions should be approved or implemented until conclusive analysis is completed.

The EPA encourages management actions which protect the environment and do not rely on additional human resources or appropriations. For example, elimination of overnight camping (by replacing sites outside of park) would reduce the need for additional housing, staffing, utilities, and water consumption and would reduce exposure of the fragile environment to human activities while maintaining the opportunity to visit and enjoy the Monument.

Based upon the procedures EPA uses to evaluate the environmental impacts of the proposed action and alternatives and the adequacy of the information in the DEIS, the Draft Environmental Impact Statement for Natural Bridges National Monument will be listed in the Federal Register in the category LO. This means that the EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal.

We appreciate the opportunity to review the Draft EIS and related documents. Please contact Paul Momper at (303) 312-6382 if you have any questions about these comments.

Sincerely,

A handwritten signature in cursive script, appearing to read "Bill Geise".

J. William Geise, Jr.  
NEPA Team Leader  
Ecosystems Protection Program

State



Michael O. Leavitt  
Governor  
Max J. Evans  
Director

# State of Utah

Department of Community & Economic Development  
Division of State History  
Utah State Historical Society

300 Rio Grande  
Salt Lake City, Utah 84101-1182  
(801) 533-3500  
FAX: (801) 533-3503

November 28, 1995



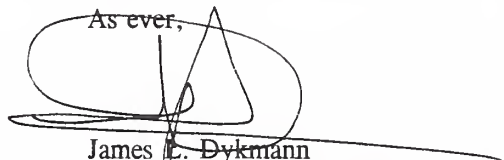
Superintendent  
Natural Bridges National Monument  
Box 1  
Lake Powell, Utah 84533-0101

RE: Natural Bridges National Monument - Final General Management Plan/Environmental Impact Statement

In Reply Please Refer to Case No. 95-1535

The Utah State Historic Preservation Office received the above referenced plan on November 21, 1995. After consideration of the Draft EIS etc. for Natural Bridges National Monument, the Utah Preservation Office supports your recommendation of Alternative B for the park. Natural Bridges contains many valuable cultural resources, and our office supports your plans to provide better protection for those resources and others.

This information is provided on request to assist the National Park Service with its Section 106 responsibilities as specified in 36CFR800. If you have questions, please contact me at (801) 533-3555. My computer address on internet is: [jdykman@email.state.ut.us](mailto:jdykman@email.state.ut.us)

As ever,  
  
James L. Dykmann  
Compliance Archaeologist

JLD:95-1535 NPS

c: Nancy Coulam  
National Park Service  
2282 South West Resource Boulevard  
Moab, Utah 84532-8000



Michael O. Leavitt  
Governor  
  
Thomas Warne  
Executive Director  
  
Clint Topham  
Deputy Director  
  
Kleston H. Laws  
District Engineer

State of Utah  
DEPARTMENT OF TRANSPORTATION

Route #3 Box 75C5  
940 So. Carbon Ave.  
Price, Utah 84501  
(801) 637-1100  
(801) 637-9538 (FAX)



Commission  
Glen E. Brown  
Chairman  
Todd G. Weston  
James G. Larkin  
Ted D. Lewis  
Hal M. Clyde

December 29, 1995

Steve Chaney, Park Superintendent  
Natural Bridges National Monument  
Box 1  
Lake Powell, UT 84533-0100

Dear Mr. Chaney:

Thanks for the opportunity to review the Draft Environmental Impact Statement, General Management Plan, and Development Concept Plan for Natural Bridges National Monument.

On Page 14 in the paragraph on Access/Circulation, the report mentions the difficulties State Road 275 creates for Natural Bridge and BLM for maintenance, patrol, and use. I am sure the Utah State Road Commission will deed or assign our interest in the 400 foot corridor if you desire. This may allow more consistent use, patrol and better fit the management program discussed in the document.

I was confused by the discussion of tamarisk. In Appendix D, on page 137, footnote 3 discusses the eradication of tamarisk, yet through the document tamarisk is mentioned with other vegetation. Page 10 mentions tamarisk as an exotic and threatens native plants and page 56 under Wetland mentions tamarisk like it is as important as willows. Top of page 30 mentions an existing tamarisk management plan, but does not elaborate. I feel you should discuss this plant and describe why you are trying to eradicate the species or at least not refer to it as part of the important wetland vegetation. } 3

I feel that camping should be provided in the park where visitors will know they are subject to patrol. Camping outside the park will be less controlled and cause more damage to Cedar Mesa. Thanks for the opportunity to comment. } 4

Sincerely,

UTAH DEPARTMENT OF TRANSPORTATION

Kleston H. Laws, P.E.  
Price District Engineer

KHL/djp

CC: Dale Peterson, Region Director

**3.** We agree. Tamarisk is an exotic species and was not meant to be described as an integral part of the riparian riverine ecosystem in Natural Bridges. We will make the necessary adjustment to the Wetlands section in the “Affected Environment.”

**4.** The possibility for new campgrounds being established outside the park is uncertain at this time, and may take ten or more years to occur. In the interim, the campground in the park will continue. When new camping areas are developed, the use of the existing park campground will be re-evaluated.

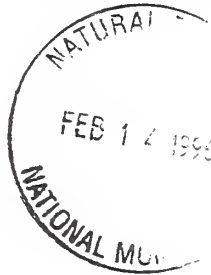


Local Government


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**San Juan County Commission**


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Ty Lewis - Chairman  
 Mark Maryboy - Commissioner  
 Bill Redd - Commissioner  
 Rick M. Bailey - Administrative Assistant

February 12, 1996

Superintendent  
 Natural Bridges National Monument  
 P.O. Box 1  
 Lake Powell, Utah 84533-0101

Dear Steve,

The San Juan County Board of Commissioners greatly appreciated your willingness to come to commission meeting to present the discuss the Bridges Master Plan. There are a few issues that we have some strong feelings about and want to have considered in the decision for the Bridges Master Plan.

Perhaps the biggest concern is the future management of the viewshed area outside the confines of Natural Bridges National Monument. While the Park Service is interested in those issues related to protecting the visual quality of the area, we do need to convey our feelings relative to the land adjacent to Monument being lands that are managed under the principles of multiple use and sustained yield. Much of the area to the West of Bridges National Monument is in a designated mining district. While we understand the new mining regulations do call for certain things to happen under certain scenarios, we also know that mining plans of operation are not required for surface disturbance of less than five acres, and while we understand that at this time mining is not a real threat, we believe that the option to do so should not be closed at this time.

5

On another subject, Wild and Scenic Rivers Studies. We do not think it is wise or even to some degree ethical, for the National Park Service to conduct studies on their own in terms. In fact it may be violation of National Policy or Agreement to do so. We believe that it is the best interest to all concerned, that this study be conducted on a broad base concept because of all of the jurisdictional problems between State, NPS, BLM, and Tribal Government. The rules regulating the study should be exactly the same for all public land entities.

6

In terms of visitor management, we understand why the National Park Service is discouraging significant development in and around the Monument. we just don't agree with it. In places like Bryce Canyon and Yellowstone, Glacier, and other units of the NPS system there are stores, cafeterias, and other visitor services. I really doubt that anyone other than the "purists" sees any fault with these facilities. in fact in many cases most believe that these facilities add to the charm of the area. We believe this same concept, using a southwest motif, could be worked into a corridor concept in and adjacent to Natural Bridges.

We think it is wrong to advertise and work to bring people to an area, and then turn them away when they get to the area. If San Juan County is ever to realize anything economically positive from having these areas in our county, then we have to have something happen that will retain people's presence in the county for a sustained period of time. While studies have been undertaken, apparently by the BLM and NPS to find places suitable for development in the U-95 corridor, it seems just a bit cavalier on the part of the agencies to not include the local communities, county or private sector in your study. This should be corrected and the study be re-commissioned to look at the issue from a broader spectrum.

7

This letter also serves as notice to the National Park Service, that any proposed expansion will not be in compliance with the San Juan County Master Plan. We believe any decisions to expand the boundaries of the Monument need to go back to the public for further review before they become final.

8

Steve, the San Juan County Commission appreciated the brief on the master plan, and while we may disagree on some issues, we appreciate your effort to keep us informed.

Thank you!

Sincerely,

*Ty Lewis*  
Ty Lewis, Chairman  
County Commission

*by Bill Fend*

**5.** We agree. Once a viewshed is identified there are no legal constraints associated with such designations unless they should encompass an area that is already encumbered by law such as legislatively established wilderness areas. Therefore, designation of a viewshed would not lock up or preclude land management or development related activities. We will state this fact in the document.

**6.** The National Park Service does coordinate with adjacent jurisdictions when considering for wild and scenic designation rivers that flow across park boundaries. A guidance document dated July, 1996 was jointly written by the National Park Service, USDA Forest Service, and Bureau of Land Management and suggests common processes and criteria for conducting wild and scenic river review in the state of Utah. On the topic of coordination and cooperation:

“Each federal agency is responsible for evaluating and making eligibility, tentative classification, and suitability determinations within its respective jurisdiction. However, river stretches are often multijurisdictional in nature, requiring close coordination efforts. Ideally, wild and scenic river studies would be conducted concurrently with other agencies having jurisdiction along a stretch of river. If this is not possible, it would be preferable that agencies jointly evaluate any river segments that cross administrative boundaries rather than end efforts at the boundaries. Where such efforts cannot be synchronized, agencies may proceed to evaluate and document the river areas within their management jurisdiction in order to not delay planning efforts.”

Natural Bridges is surrounded by lands administered by the Bureau of Land Management. The BLM has previously made a draft finding of eligibility for White Canyon Creek upstream and downstream of Monument boundaries, thus conforming with our finding of eligibility. The BLM did not find Armstrong Canyon eligible; however, the Monument’s finding of eligibility for Armstrong Canyon is due to resources (the natural bridges) that are found only within the Monument.

Natural Bridges National Monument contains entirely federally owned land. Wild and scenic designation would have little if any effect on uses within the Monument. The Monument is already administered for protection of the outstandingly remarkable resources. No uses would be foreclosed or curtailed that are not already so restricted.

**7.** We are aware of two efforts to which this comment may refer. One was a university graduate research project not commissioned by NPS or BLM. The other is the regional recreation strategy being discussed by the Canyon Country Partnership, of which the San Juan County Commission is a participant. In any studies of this type conducted or sponsored by the NPS, input from local residents is and will be an important part.

**8.** We agree. The National Park Service concluded as documented in the Natural Bridges General Management Plan, "...that no modification of the park [external boundary] is now necessary." The park is fully aware that any boundary expansion requires a boundary study. This study is subject to the regulations and guidelines of the National Environmental Policy Act, which requires public involvement and input.



Organizations

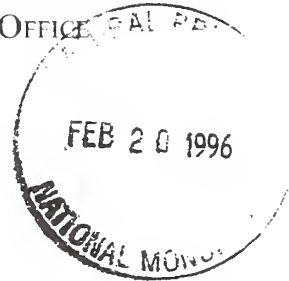
## National Parks and Conservation Association



ROCKY MOUNTAIN REGIONAL OFFICE

February 15, 1996

Steve Chaney  
Superintendent  
Natural Bridges National Monument  
PO Box 1  
Lake Powell, Utah 84533-0101



Dear Steve,

The National Parks and Conservation Association appreciates the opportunity to submit comments on the Natural Bridges National Monument draft General Management Plan. NPCA is America's only private nonprofit citizen organization dedicated solely to protecting, preserving, and enhancing the U.S. National Park System. An association of "Citizens Protecting America's Parks," NPCA was founded in 1919, and today has more than 450,000 members.

### Interim Management Principles

The GMP appropriately recognizes the issues and problems confronting Natural Bridges -- increasing visitation, external impacts, inadequate information on park resources, inadequate housing and infrastructure. The GMP also does a good job of identifying the myriad studies and plans which need to be completed to adequately address these issues and problems. As a citizens organization working to protect our parks, NPCA will utilize this list to help argue for sufficient funding for our parks.

Even in the best of funding scenarios, however, it will be some time before many of these plans are completed. In light of this reality, the Park Service should state in the GMP how it will proceed in the absence of adequate information or planning to address issues and problems. We believe that the Park Service's legal mandate to protect park resources unimpaired for future generations means that, in the face of inadequate information or planning, the Park Service has a responsibility to err on the side of caution in making and implementing management decisions. In respect to internal management issues, this would mean, for example, that if there is reason to suspect that an action could harm or degrade park resources, but the Park Service lacks conclusive information because of inadequate research or planning, that the Park Service would not proceed with the action until adequate planning or research is completed. In respect to activities outside park boundaries, this would mean

Rocky Mountain Regional Office  
P. O. Box 1563, Salt Lake City, UT 84110  
Tel: (801) 532-4796 • Fax: (801) 532-4796

National Office  
1776 Mass. Ave., N.W., Washington, D.C. 20036  
Tel: (202) 223-6722 • Fax: (202) 659-0650

that if there is reason to suspect that an action could harm or degrade park resources, but the Park Service lacks conclusive information because of inadequate research or planning, that the Park Service would oppose that action unless the proponent can demonstrate that park resources will not be harmed.

9

A statement of these principles should be included in the GMP.

#### Statement of Significance

The draft GMP includes several "significance" statements which seek to "capture the essence of Natural Bridges National Monument's importance to our natural and cultural heritage." In addition, throughout the plan, additional statements are made that recognize many of the features or elements that make Natural Bridges a special place to park visitors. NPCA wants to underscore the importance of several elements and encourage the Park Service to ensure adequate recognition and consideration of these somewhat "intangible" values.

First and foremost, we believe a visitor's experience of Natural Bridges is influenced as much by the setting of the park, as by the features within the park itself. Natural Bridges is located in a vast region of undeveloped wildlands, and, as the draft GMP notes, is immediately surrounded by a "viewshed basin" which appears little-disturbed by human activity. This sense of remoteness and wildness is a major part of a visitor's experience, and provides an important context for viewing and enjoying the specific features of Natural Bridges. Many visitors experience the park as providing an intimate and relatively accessible glimpse into a larger, less accessible and thus mysterious wild landscape. As the GMP notes, the visitor's experience is not confined by the park boundary. If the lands around Natural Bridges, especially those in the immediate viewshed, were developed or scarred with visually or otherwise intrusive human activity, the visitor experience at Natural Bridges would change dramatically. As noted elsewhere in these comments, NPCA encourages the Park Service to actively seek careful stewardship of the landscape around Natural Bridges.

Second, Natural Bridges is highly valued by many visitors because it is experienced as "off the beaten path," and in contrast to a growing number of parks, still provides a primitive, non-commercialized and small scale camping experience. These qualities contribute to a sense of "getting away from it all" and intimacy with the park landscape which is sometimes hard to find in larger park campgrounds. NPCA believes these are legitimate values that deserve consideration, and encourages the Park Service to give them full recognition, especially in moving ahead with VERP planning.

Finally, two extremely important resources at Natural Bridges that are often taken for granted are natural silence and darkness. The draft GMP mentions these resources under "Affected Environment" and appropriately recognizes their significance. The draft GMP notes "the degree of silence one encounters in most of Natural Bridges National Monument is one of the park's most important resources." We agree. The draft plan also notes that "An absence of lights from a metropolitan area combined with clear air and the position of the park atop a plateau provides a nearly 360-degree view of the stars and an outstanding night sky." The absence of intrusive human-caused lighting also enhances a visitor's enjoyment of the park's natural values. In addition to recognizing these values, however, the plan needs to discuss ways to ensure their protection.

10

### Visitor Services/Facilities

NPCA strongly supports the principle stated in the draft GMP that "the amount and location of visitor facilities must stay in scale with their surroundings." Similarly, we strongly support the decision to propose only limited expansion of the visitor center and slight modification of the parking lot. We also strongly support the position that these changes represent the maximum acceptable size for these facilities, and that potential future growth in visitation is better managed by other strategies rather than further expansion of these facilities.

The GMP appears, however, to leave the door ajar for consideration of relocating the visitor center to other locations "within" as well as "outside" the monument. The idea of a new visitor information center outside the monument -- especially an interagency center serving the Cedar Mesa Plateau -- makes some sense to NPCA. But we believe the idea of potentially relocating and enlarging the visitor center in Natural Bridges seems inconsistent with the principle of "appropriate scale" and should be eliminated.

We also strongly support the proposed decision to maintain the existing size of the campground. As the GMP documents well, enlarging the campground in the monument could harm the park's natural and cultural resources and would create a campground out of scale with the monument's landscape. We agree that the existing problem of overflow camping needs to be dealt with, but that there are better and more appropriate solutions than enlarging the monument's campground.

The draft GMP is unclear about the potential future function of the existing campground if additional camping facilities are developed in the region. On page 39, the GMP says that if additional camping facilities are developed, "an examination of the most appropriate use for the existing campground at Natural Bridges National Monument would be conducted." But on page 51,

11



the draft GMP states a much more narrow conclusion, saying that "Should sufficient camping be provided elsewhere in the area, by the BLM, USFS, or State, the Natural Bridges campground would be used for reserved group camping, converted to a picnic area, or used for other administrative needs." NPCA believes the option of maintaining the campground for individual (not just group) use should be preserved for future consideration. As noted above, the experience of camping in a small-scale, non-commercialized, primitive campground is highly valued by some park visitors and enhances enjoyment of the park's resources.

The draft GMP states that "visitor comfort amenities would be added at many of the pullouts along Bridge View Drive" including "comfort stations, benches, bicycle racks and trash containers." While we recognize the need for some additional facilities, we encourage the Park Service to keep facilities to the minimum necessary to serve visitors and to locate facilities with great care so that visual intrusion on the natural setting is minimized. In the desert setting of Natural Bridges, human constructed facilities tend to stand out and easily dominate a visitor's perception of the landscape. Ideally, human constructed facilities should be largely unnoticeable until a visitor looks for them. Please keep in mind also how location affects photography of the natural setting. Sometimes it is hard to take a landscape shot in the "front country" of a national park without including an interpretative sign or comfort station.

#### Visitor Experience Resource Protection planning

NPCA strongly supports the decision to implement VERP planning at Natural Bridges. This ongoing planning effort should be made one of the park's highest priorities.

The draft GMP is correct in stating that VERP emphasizes conditions desired to be maintained in the park. However, it should be recognized that an objective of VERP is to identify the types and levels of visitation that can be accommodated without compromising these desired conditions. This does not necessarily involve limiting numbers of visitors, but it does require careful planning to avoid encouraging types or levels of visitation that may compromise desired conditions.

NPCA generally supports the delineation of four zones and the desired conditions described for the zones. The scale of the map makes it difficult to carefully assess the location of specific boundaries, but the development zone appears to be drawn larger than necessary or appropriate. The development zone should encompass existing and proposed development, nothing more.

The VERP will need to address how to keep noise, light and other impacts from activities in the motorized sightseeing zone and development zone from intruding on the conditions and



experience the plan seeks to provide in the mesa and canyon natural zones. It should not be assumed that activities in the motorized sightseeing and development zone take priority, if it is determined that undesirable impacts are occurring in the natural zones due to allowed activities in the other zones.

The "Issues and Concerns" section of the draft GMP discusses the fact that approximately 97 percent of visitors travel the loop road but only 17 to 18 percent actually hike the trails down into the canyons. This may be an appropriate balance, particularly if the desired conditions identified in the plan are to be maintained. The draft GMP properly notes the extremely fragile nature of the soils on the mesa top and that use and development are the cryptogamic soil's worst enemies. Similarly, the GMP properly stresses the extremely fragile nature of the canyon environment and states that the area recovers extremely slowly from impact. In addition, the GMP states that a desired future condition for the canyon areas is solitude.

Due to lack of monitoring the Park Service does not know the nature and extent of impacts from existing use, but it is certain that impacts will increase as visitor use levels continue to increase. Implementation of monitoring should be a high priority. In the meantime, NPCA cautions the Park Service against taking measures that encourage greater use of the canyons and mesa area, given the extreme sensitivity of these areas.

### Wilderness

NPCA is pleased that the GMP includes a wilderness suitability study. However, we strongly urge reconsideration of several aspects of the study.

The area located within the loop road should be included in the wilderness recommendation. Geographically it forms a very large core or heart of the monument. To exclude it from wilderness recommendation is to leave it vulnerable to inappropriate use and development in the future.

Furthermore, there are no human developments or intrusions in this area which warrant its exclusion. It is a natural area, comparable to other areas in the park recommended for wilderness. The only human intrusions we are aware of are primitive trails.

The plan seems to suggest that this area was excluded from wilderness recommendation because the sights and sounds of vehicle traffic are frequently seen and heard. This is not an appropriate basis for excluding it. Roads and highways often form the border of administratively proposed or congressionally established wilderness.

12

Wild and Scenic River

NPCA strongly supports the determination that White Canyon Creek, along with its tributary Armstrong Canyon Creek, are eligible as a wild river and suitable for inclusion in the Wild and Scenic River System. We question, however, the failure to include the tributaries, Tuwa and Deer Canyon Creeks, and encourage the Park Service to reconsider inclusion of these areas.

13

Tuwa and Deer Canyon Creeks are an integral and inseparable part of the White Canyon complex within Natural Bridges. They are not minor or insignificant tributaries, but major forks of White and Armstrong Canyons. Tuwa and Deer Canyon Creeks contain the same geologic, scenic, recreational and cultural qualities as the rest of the canyon system determined eligible and suitable, except that they do not actually contain a bridge. Many rivers and streams have been found eligible and suitable for Wild River designation without containing bridges. Why should these canyons be excluded because of this reason, just because their neighboring canyons (of which they are actually an integral part), do have a bridge? It simply ignores the natural ecology and natural system of the area to exclude these tributaries.

Resource Management and Land Protection/Adjacent Land Management

The GMP appropriately identifies the important relationship between the natural, scenic, cultural, water, air, wildlife and other resources of Natural Bridges and the surrounding area. Anyone who has visited the monument, even those untrained in any ecological sciences, is quickly aware that the ecological health of the monument and the experience of the visitor is dependent on careful stewardship of the lands surrounding Natural Bridges. Careful stewardship of the park's watershed and viewshed lands is particularly critical.

We believe the Park Service, Bureau of Land Management and US Forest Service have made great strides in recent years towards establishing improved communication and coordination regarding transboundary issues. Without question, these are the first steps to ensuring the long-term protection of the special values of Natural Bridges.

On page 28, the draft GMP states that the BLM and NPS managers in and around the park have established cooperative ties and protocols that generally develop consensus and/or require concurrence on issues that affect the other agency. What are these ties and protocols? Do they involve opportunities for public review or input? Are they adequate to ensure that activities do not proceed which could harm the park's values? How do they deal with situations where lack of baseline data, monitoring or research leaves uncertainty about the nature or

extent of impact? The draft GMP should provide a more specific description that answers these and other questions.

14

While it is appropriate for the draft GMP to stress the importance and role of coordination and cooperation, the GMP should also recognize that there are legal mandates which require other federal agencies to avoid harmful impacts national park system units. In particular, the GMP should cite Section 1a-1 of the NPS Organic Act which prohibits the Interior Secretary from exercising his/her authority "in derogation" of park resources. Similarly, the GMP should recognize in the main text of the document (as it does in the Appendix on page 156) that the Federal Land Management Act and its implementing regulations establish an affirmative responsibility for the BLM to seek consistency with the approved plans and programs of adjacent federal land management agencies.

NPCA urges the Park Service to formally request the BLM to initiate a plan amendment for the purpose of updating and amending its Visual Resource Management zoning. This is consistent with and should be required by the GMP emphasis on anticipating and avoiding potential conflicts through proactive coordination. As the GMP notes, the current zoning could be interpreted to allow surface disturbing activities that would degrade the visitor experience in Natural Bridges. It largely ignores the valuable information available from the GIS visual mapping completed by the Park Service. The Park Service should act now to seek consistent zoning which avoids potential problems, rather than wait until projects are proposed that present potentially adverse visual impacts.

Similarly, the Park Service should formally request the BLM to consider Area of Critical Environmental Concern designation for the critical watershed and viewshed lands around Natural Bridges. Under BLM's own manual guidance, the integral relationship of these lands to the monument qualifies them for ACEC designation. ACEC designation is another tool to avoid potential future conflict through current planning. The NPS would be remiss to not seek an ACEC designation.

#### Boundary Expansion

The analysis assessing NPCA's proposed boundary expansion is inadequate and the strained rationale provided for not suggesting boundary expansion does not support the conclusion.

NPS Management Policies provide that the Park Service will conduct studies of potential boundary adjustments and may recommend boundary revisions

to include significant resources or opportunities for public enjoyment related to the purposes of the park



to address operational and management issues such as access and boundary identification by topographic or other natural features or roads

to protect park resources critical to fulfilling the park's purposes.

The GMP fails to adequately assess NPCA's boundary adjustment recommendation against these criteria. It takes an inappropriately narrow and rigid view of what is meant by "significant resources or opportunities for public enjoyment related to the purposes of the park." The GMP states, for example, that "the boundary need not be altered on account of bridge-related geologic processes" because while "it is true that the streams above the park collect a sizable volume of water and contribute to the formation of the bridges, it is the local geomorphic condition that accounts for the bridges within the park." This position reflects a postcard (or perhaps more appropriately, a postage stamp) view of parks and how their boundaries should be drawn that does not serve the system well.

Furthermore, the GMP fails to adequately analyze whether the presence of archeological resources (especially in combination with other resources) warrant a boundary adjustment. The GMP in effect throws up its hands on this issue, taking the position that because surveys are lacking, "there is not objective way to change the park's boundaries based on prehistoric resources." Yet at the same time, the GMP admits that "the total number of mesa topsites within and outside the park is likely to be in the thousands."

15

The discussion on scenic resources is particularly disturbing. Throughout the GMP, the importance of the scenic landscape surrounding Natural Bridges and its relationship to visitor experience is documented. Anyone who has every visited the park experiences the inseparable relationship between the park and its scenic setting. This relationship is made even more critical because of the small size of the monument. Furthermore, the GMP appropriately and repeatedly acknowledges, that despite increasing coordination between the BLM and NPS, these scenic lands are vulnerable to surface disturbing activities that could result in significant visual scarring.

The NPS seems to rely largely on the discussion of BLM's Visual Resource Management zoning around Natural Bridges described in the section on "Scenic Resources" in Appendix F (Rationale for Rejection of Major Boundary Change" to justify its conclusion at the beginning of that section that "no boundary adjustments are now necessary based on the criterion of scenic protection." Yet a careful look at this zoning and what BLM has allowed in VRM Class II and III areas elsewhere only confirms



that the scenic lands around and visible from Natural Bridges are not safe from visually scarring activities. The fact that BLM failed to zone the lands visible from Natural Bridges as VRM Class I (which should have been done to begin with) underscores our concern.

Also disturbing is the Park Service's apparent reliance on their assessment that the cost of vegetative treatments, public controversy and the cost of mitigation will make visual scarring from vegetative treatments unlikely. NPCA questions the reliability of this assessment, especially over the long-term. In addition, it ignores the larger problem of potential mineral or oil and gas development.

NPCA is also troubled by the statement that "the NEPA process and guidelines, and requirements in law and in the policies of the neighboring land management agencies are legally required means to ensure interagency cooperation and to ensure the most practicable mitigations." First of all, "interagency cooperation and the most practicable mitigations" may well not be enough to protect the important scenic values around Natural Bridges. The Park Service chose to rely on an interagency agreement and NEPA -- rather than boundary expansion -- to protect important visual lands and archaeologic resources around Hovenweep. The result was at least one oil and gas drilling well and road upgrading project within what was supposed to be a "resource protection zone" protected from surface disturbing activity.

Finally and perhaps most troublesome, is the statement that the GMP "does not suggest expansion of the boundary, because the agreement to join with the U.S. Forest Service and the Bureau of Land Management in mitigating visual effects of land-management practices of those agencies is on a case-by-case basis. The types of impacts that would be mitigated include visual effects, water quality, and loss of soil."

What "agreement" is the Park Service referring to? What is the nature of this "agreement?" Is it formal and written? What does it say and why isn't it included in the GMP? To what extent and in what circumstances, has it been relied upon already and has it been successful in protecting scenic values?

16

Did the NPS really agree to seek "mitigation" on a "case by case" basis? How is this consistent with the Park Service's recognition elsewhere that anticipating and avoiding conflicts through proactive planning, zoning and management prescriptions is the best approach to protecting park resources from external threats?

NPCA's position is that our recommended boundary adjustment would, without question, enhance the protection of the existing

resources and visitor experience of Natural Bridges. It would also protect additional lands of outstanding scenic, archeological and recreational value. Natural Bridges could be transformed from a postcard style park, where the most unusual or outstanding features are framed narrowly by the boundary, and the ecological setting and context are excluded. A boundary adjustment would help guarantee the long-term ecological health and scenic integrity of the monument.

We support and commend the Park Service for its efforts to encourage stewardship of the lands around Natural Bridges through cooperative agreement. This is absolutely essential. But these efforts should not obscure the value and benefits of a boundary adjustment.

#### Aircraft Overflight

The GMP appropriately recognizes natural quiet as an important and outstanding value at Natural Bridges. The GMP should discuss the threat of aircraft overflight, particularly scenic tours, to natural quiet at the monument. The GMP should also state NPS authority to safeguard the values and resources of Natural Bridges (and other parks) from intrusive activities, including aircraft overflight. (For a discussion of these authorities, please see NPCA's July 15, 1994 comments to the FAA on the Advance Notice of Proposed Rulemaking regarding Overflights of Units of the National Park System.") To protect the monument's values, the GMP should request FAA to establish restricted airspace over the monument. } 17

#### Commercial Use

The GMP states that commercial use of the monument is minimal. The GMP should assess and propose decisions regarding future commercial use at the monument. In the alternative, the GMP should state that a commercial use plan will be prepared before any additional commitments are made regarding commercial use. } 18

#### Housing:

NPCA recognizes the need for additional housing for monument employees and the infeasibility of constructing it outside the monument. We also recognize the need for and benefits of providing limited housing for BLM employees working on Cedar Mesa. While caution must be exercised in the extent, size, location and design of additional housing, we support the idea of limited additional housing facilities in the monument.

The GMP appropriately states that an EA will be prepared before housing is constructed. The GMP states, however, that the

EA is expected to be approved by the spring of 1995, which is a year ago. What is the status of this EA?

} 19

Thank you for considering our comments. Please keep us informed about future opportunities to comment on park and related adjacent land issues.

Sincerely,

A handwritten signature in cursive script that reads "Terri Martin".

Terri Martin  
Rocky Mountain Regional Director  
National Parks and Conservation Association

**9.** For land uses outside the monument boundary, NPS will communicate with the managing agency or private landowner to encourage minimizing impacts to monument resources. If available information is inadequate for a well-informed management decision, NPS will encourage additional information-gathering before a decision is made. NPS policy and participation in planning and management of external land uses that affect the monument is discussed on pages 23 and 26.

**10.** A section on lighting was added to the Facility Design Guideline. The monument is currently replacing its outdoor lighting with motion detectors and photo sensors so that lights will shut off when no one is nearby.

**11.** We agree. The “Camping” section under “Alternatives Considered But Rejected” will be changed to show a “less narrow” view of the future of the campground.

**12.** The area inside the loop road is less than the Wilderness Act guideline of 5000 acres, and is completely circumscribed by a paved, heavily traveled road. Because of this, the area does not meet the Wilderness Act requirement that wilderness be “untrammeled [unconfined, unrestrained, unrestricted] by man.” Inside the loop road, an area approximately two miles by two miles, it is virtually impossible for a visitor to have a “wilderness experience,” (i.e. to travel by nonmechanized means for an extended period without encountering human modifications).

**13.** White Canyon and Armstrong Canyon Creeks were found eligible because of the presence of “outstandingly remarkable” resource values, namely the three natural bridges. The resource values of Tuwa and Deer Canyon Creeks, while scenic, are common to numerous streams in the region, thus they are not outstandingly remarkable. See also response #6.

**14.** NPS and BLM managers inform each other of proposed actions through various means including correspondence and NEPA documents. Public review and input on proposed actions is welcome, because predicting environmental impacts always involves uncertainty. Managers prefer to rely on conclusive objective data, but for various reasons it is not always available. The National Park Service will encourage compilation of a solid data and research base to guide management, but in some cases we must use professional experience and judgment. See response #9.

**15.** It is not the intent of the GMP “...to adequately analyze whether the presence of archeological resources warrant(s) a boundary adjustment.” The GMP clearly states that such an analysis goes far beyond the scope and intent of the present study because of the immense cost of completing surveys. The plan goes on to state that the lack of such data “...does not absolve the (agencies) NPS, BLM, and USFS (all agencies) from ultimately completing comprehensive surveys and determining the significance of all these resources.”

**16.** The agreement referred to on page 77 is an informal agreement between public landmanagers. On a case by case basis, landmanagers work together to identify viewsheds that are visually important and sensitive to change. Presently, there are no developments that affect these identified viewsheds. A Viewshed Frequency Map



has been sent to BLM and USDA Forest Service to supplement decision-making of land management actions. Refer to response #1 (Blanding Public Meeting).

**17.** The section on "Natural Silence" has been modified to include, "...in the Spring of 1995 and 1996 a sound monitor was in place to gather baseline information on the effects of aircraft overflights." The impacts have been included in the Environmental Consequences section of the document. For further updates, refer to Natural Bridges NM Resource Management Plan.

**18.** Future commercial uses at the monument would be governed by the Southeast Utah Group Commercial Visitor Services Management Plan and other NPS policies, which provide guidance on whether specific commercial uses are necessary and appropriate. Proposals for new commercial uses would be evaluated according to these policies and plans.

**19.** This Environmental Assessment has been completed and the accompanying Finding of No Significant Impact (FONSI) was signed by the Field Director of the NPS Intermountain Field Area on June 26, 1996.

Individuals

ONE METROPOLITAN SQUARE, SUITE 2600  
ST. LOUIS, MISSOURI 63102-2740  
(314) 621-5070  
TELECOPIER (314) 621-5065



Jeffrey D. Fisher, P.C.

January 11, 1996

Mr. Steve W. Chaney, Superintendent  
Natural Bridges National Monument  
Box 1  
Lake Powell, Utah 84533-0101

Re: Proposed General Management Plan

Dear Mr. Chaney:

This is a comment on the proposed General Management Plan for Natural Bridges National Monument, as described in the summary which I received as an interested party. My comments are made on behalf of myself and the other members of my family as periodic visitors to the National Monument.

We support the proposal alternative, with two exceptions: first, we urge that the campground not be eliminated, at least for tent camping, and second, we request reconsideration of the elimination of the picnic area.

We have camped at Natural Bridges on several family vacation trips to southern Utah over the past 20 years, and have found it to be without exception one of the best experiences on each trip. because of the remoteness, the quiet, and the small number of sites. We have not camped on BLM land outside the Monument, but have found BLM campgrounds in the past generally not to be up to the standards of NPS campgrounds, due we believe to lack of sufficient maintenance accompanied by greater accessibility by non-NPS visitors who unfortunately often do not have the same regard for BLM land as they have for NPS areas.

If lack of maintenance funds is a problem, perhaps the fee could be increased; my recollection is that the fee has been lower than in other comparable areas because of a lack of running water; however, we view this as an advantage and not a detriment, along with the fact that the area is too small to permit use by large RV's, which is part of its charm and much of the reason for its quiet atmosphere. There are all too few places, especially in NPS areas, where camping is still possible without hearing generators and seeing electric lights.

If the small size and lack of running water are the reasons for eliminating the campground, please consider keeping the area open (or moving the campground to another area)

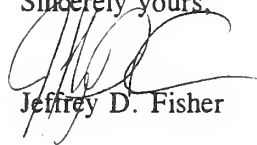
Superintendent, Natural Bridges National Monument  
January 11, 1996  
Page 2

as a tent-only area, and perhaps even as a walk-in campground. Although we are not backpackers, we would gladly carry in our gear if it meant continued access to the camping experience at Natural Bridges.

We have never used the picnic area at the Monument, but use other NPS picnic areas wherever possible and might very well use this one in the future. Eliminating the picnic area, it seems to us, especially if the campground were also eliminated, would make the Monument a pure drive-in, drive-out day use area, which deprives people like ourselves of the ability to stay longer and enjoy more of what the Monument has to offer. In addition, due to the fact that (fortunately!) there are no commercial facilities within 40 miles, if the picnic area were eliminated, unauthorized roadside or trailside picnicking would be expected to increase, resulting in dispersed litter and food waste.

Thank you for your consideration of these comments.

Sincerely yours,



Jeffrey D. Fisher

**20.** See responses #4 and #11.



Rural route 1 . Box 74  
Starbuck . Minnesota 56381

11 January 1996

Superintendent  
Natural Bridges National Monument  
Box 1  
Lake Powell, Utah 84533

Dear sir:

I have had the privilege of reading the draft **General Management Plan / Development Concept Plan for Natural Bridges National Monument** (September 1995), and would like, first of all, to state my overall support for the implementation of Alternative B, as described in the draft statement.

I am very supportive of Plan B's attention to the critical need for improved inventory and monitoring of the monument's natural and cultural resources, and for improved monitoring and evaluation of visitor experiences and services. This is essential.

I welcome the Plan's attention to improved accessibility to mesa top overlooks, restrooms, picnic area(s), and other features and services in the monument's more intensive use areas. While I have much appreciated overnight camping experiences in the monument over the years, both at the present campground and at the old access to the park, at Owachomo Bridge, I strongly support the elimination of the campground, if and when a joint agency public camping area can be developed in the vicinity, preferably east of the monument entrance.

The Plan could be clearer with respect to the future of the photovoltaic power system, installed in 1980, and how it relates to the monument's interpretation plan. The plan for the old access trail on the south side of Armstrong Canyon, including its preservation and use, is not clear, other than noting its recognition in the National Register of Historic Places. I would recommend the restoration and upkeep of this trail only from the canyon floor up to an overlook at the mesa top.

21

I am very appreciative of the interpretative plan's emphasis on the "total environment," its attention to effectively integrating interpretation with management, and its recognition of the need to provide interpretive services that strengthen and enhance diversity. I also like the recognition of the need for keeping interpretation at a low profile, not becoming too intrusive in this relatively small monument.

As primarily a day visit site, and as the only major interpretive center in a fairly large area, there is some justification for giving greater attention to demonstration projects in both interpretation and management, including interagency cooperation, use of volunteers, community involvement, and strengthening and sustaining the diversity of the monument's visitation. The fact that one fifth of its visitor load is non-English speaking, for example, invites consideration of interpretive staff exchange programs with German, French, and other park systems. As one of a handful of small monuments set aside 80-90 years ago for the purpose of commemorating and celebrating rock, it may be useful to demonstrate an interpretive theme that gives emphasis to the interface of rock and human cultures and history in this particular setting.

22

I have much appreciated the many visits I have made to Natural Bridges National Monument since my first encounter fifty years ago, and look forward to visits in the future. I am deeply concerned that public support of the monument not be diminished, and that this small area be assured of its protection for many generations to come. The proposed Alternate B appears to be an important step, both in strengthening public use and support, while also improving its protection.

Thank you for the opportunity to share these comments.

Sincerely,

Jim Mason



**21.** “...with respect to the future of the photovoltaic system....”, the proposal, under “Utilities” section, explains it as, “All other utility systems would remain in place to service the park.” The photovoltaic system “...relates to the monument’s interpretation plan....,” as an example of solar power to inform the visitor about the uses of alternative energy sources. Information is available in pamphlet form and in a short audio message located “...at the solar panel array field overlook.” The old access trail is not part of the monument’s formal trail system, thus it will not be maintained or promoted with visitors, but visitors still may use it if they choose.

**22.** The purposes for the establishment of Natural Bridges National Monument including its geological resources, are extensively described, discussed and considered in the Plan for Interpretation, which is part of this document. The monument actively recruits seasonal workers qualified in languages of the most frequent foreign visitors.

January 12, 1996

Superintendent  
Natural Bridges National Monument  
Box 1  
Lake Powell, UT 84533-0101



Thank you for the information on the draft GMP/EIS for Natural Bridges NM.

I worked at NABR for six months as a seasonal in 1985, and again as a seasonal and a permanent employee from November 1986 through March 1988. When I worked there, 350 people in the visitor center would be the busiest day of an entire year. I suspect that's getting typical on a weekend.

I support the proposal for increased coordination and cooperation with BLM to provide visitor facilities on BLM lands outside the monument, particularly camping opportunities. Providing a campground on BLM land would allow the NPS to conduct interpretive programs that would reach a larger audience than available from the NPS campground.

It is admirable for the NPS to propose removing structures from within park boundaries rather than expanding facilities.

A restroom along Bridge View Drive would certainly improve the visitor experience, provided that the structure is sited to reduce the intrusion on viewsheds. The location of the restroom and its impact on the viewshed should be considered from points other than Bridge View Drive. In particular, the viewshed from Zeke Johnson's old trail to the south of Owachomo Bridge and other points along the southwestern rim of Armstrong Canyon such as Howling Dog pictograph panel and Petroglyph Rock along Highway 95 should be considered when locating a structure.

23

Thank you for the opportunity to comment.

Aida Parkinson  
1515 Airport Road  
McKinleyville, CA 95519

Redwood National Park  
1125 16th Street  
Arcata, CA 95521

**23.** Visual impacts will be considered in the location of the restroom.

Owen Severance  
P.O. Box 1015  
Monticello, UT 84535



February 14, 1996

Steve Chaney, Superintendent  
Natural Bridges National Monument  
Box 1  
Lake Powell, UT 84533

Dear Steve,

I would like to make some comments on the Draft GMP for Natural Bridges National Monument. While there are good ideas in the document, I have problems with several areas - mostly because of issues that weren't adequately addressed.

I attended your meeting in Blanding last night because I had several questions about the GMP; however, you let Randy ? and Gail Johnson dominate the discussion so that no one else could ask any questions. I waited almost two hours for an opportunity to say something; and, when Randy started at the beginning again with his complaints, I finally left. In my opinion, you did an extremely poor job of running the meeting. I should have stayed at home and watched the basketball game instead - it was a lot more interesting.

#### I. VISUAL RESOURCE PROTECTION

I was unable to find any reference in the GMP about the importance of the views into the Monument from the areas outside of the Monument. You seem to be concerned only about what visitors see from the Loop Road and overlooks. The "Facility Design Guideline" does not include any height limitations on structures and does not object to the color of the roofs in the residence area which are not compatible with the adjacent vegetation. No comments are made about the visually obnoxious poplar trees in the residence area. } 24

The first view of the Monument that most visitors have after leaving U95 is where the entrance road rounds Maverick Point. The oversized PV field is obvious along with the roofs of the structures and those exotic poplar trees. As the visitor approaches the Monument's boundary, the roofs and poplar trees are visible again. The whole visitor center/residence/maintenance complex can be clearly viewed from the Bears Ears and Deer Flats Roads. Hikers can see the maintenance/residence area from both sides of White Canyon. The views of the developed area from both inside and outside the Monument must be considered in the GMP.

The GMP should discuss ways to improve the visual quality of the Monument. The hideously ugly wood rail fences that were installed after the road was rebuilt should be removed and replaced (if necessary) with less visually offensive fences. The photovoltaic system should be downsized and the surplus area should be revegetated. The proposal to install a vault toilet on the loop road will create another eyesore. Although the location of the

proposed toilet is not specified in the GMP, you said at the meeting that it will be placed near the Kachina Bridge Parking area. I don't know of any place in that area where it could be adequately screened from view. Again, you should be trying to improve the appearance of the Monument, not create additional visual impacts. Additional eyesores are the "park operations area" and the sewer lagoon area. These places resemble junk yards. Is it really necessary to store every piece of junk that accumulates in the Monument? Both should be cleaned up. Just because they can't be seen from the loop road doesn't mean that visitors to the Monument won't see them.

The proposed Visitor Center expansion will result in a negative visual impact if it is done as proposed. The administrative area expansion should be done by extending the building to the north instead of the west. The size of the expansion should be much smaller - on the order of 700 square feet. An addition this size would accommodate at least four more offices - an adequate amount considering the limitations in staff caused by the lack of unlimited housing. As proposed, the addition will entirely change the character of the building. And the proposed 500 square foot addition for book sales will block most if not all of the windows on that side of the Visitor Center. The handicap accessible rest room on the west side of the VC started the visual degradation of what was a visually attractive building. By tacking on additions that don't follow the existing lines of the building, you are creating significant negative visual impacts.

## II. VISITOR EXPERIENCE/MANAGEMENT ZONES

The proposed "development zone" (map, p.35) is too large. It takes in part of Tuwa Canyon that should be in the "canyon natural zone" and other areas that will not be developed because of visibility problems, steep slopes, or the presence of archaeological sites. The development zone should be divided into at least two sections with the "park operations area" being one and the second being an area that includes the campground, sewage lagoons, housing and visitor center, PV system, and well access and pipeline. It should also include the other possible well location with its access route. The resulting "development zone" would be at least a third smaller than your proposal and still include all of the area necessary for future development.

25

## III. CONSERVATION OF RESOURCES

The draft GMP ignores the need for energy and water conservation. The location of Natural Bridges National Monument should alert you to the fact that there is no free lunch - energy and water resources are much more difficult and expensive to acquire than if the Monument were located next to a populated area. If a significant ongoing conservation program isn't part of the GMP, there won't be any reason for you to keep trying to reduce your resource consumption. In the past, even the expense of developing water and energy resources hasn't forced you to minimize the use of those resources, so policy statements should be made in the GMP to require reasonable conservation measures with the goal of reducing resource consumption to the necessary minimum.

26

### A. Energy Conservation

I wasn't able to get an update from you on Tuesday, so I'll assume no significant changes have taken place since our last discussion. As a reminder,



I have been using a small photovoltaic power system for 15 years, so I do know something about energy conservation.

A complete electrical load study has to be the first step in determining where electrical power consumption can be reduced. This study should include every electrical load in use in the Monument. You will find many unnecessary sources of power consumption that can be eliminated by simple means (such as switches on "phantom loads" so that they are not on all of the time). The greatest reductions in power consumption can come from the replacement electric clothes dryers and electric refrigerators with gas appliances. How many electric clothes dryers are there? How many have been replaced? The elimination of the electric clothes dryers alone should reduce the load enough to defer the addition of 7000 watts of PV panels that you were talking about.

I am curious about how many "Mr. Coffee" type coffee makers are in use at the Monument. These consume about 600 watts each and are probably on most of the day. They should be banned and replaced with thermos bottles. Brew the coffee on a gas stove and put it in the thermos bottle. Instant savings of a considerable amount of energy. (My daily electrical power consumption is less than what one coffee maker consumes in one hour.) I am sure that there are numerous other simple ways to save significant amounts of energy that wouldn't reduce your standard of living. For example, use heat/motion detectors on light switches to turn off lights when they aren't needed. Turn off computers and other office equipment when they aren't being used. (Look at the power requirements label of your copy machine if you want to see a real power guzzler.)

Another example of wasted energy is the light on the front of the Visitor Center. If that is a 400 watt Mercury Vapor light and it is on for 12 hours/day, then approximately 10 PV panels are dedicated just to it. A more appropriate lighting system should be used.

#### B. Water Conservation

The GMP should state that water will be treated as a non-renewable resource. Your main well has been in use for 30 years. What are you going to do if it can't supply the majority of the water that you need? Your options are limited and the Monument's needs 100 years from now should be considered.

The toilets in the Visitor Center make up the largest water consumption in the Monument. In the long run, the least expensive way to conserve water would be to convert these toilets to low flush units. Because of the long sewer line run at low gradient, it would probably be necessary to install a holding tank adjacent to the VC and use a sewage grinder/pump to transfer the sewage to the existing sewer line. If this were done as part of the Visitor Center expansion, the cost would be reasonable - a lot cheaper than drilling another well and installing a new water line.

Bluegrass lawns are inappropriate in a area with a limited water supply. They should be eliminated. If you have to have a green ground surface, pour concrete pads and cover them with astroturf.

A new generation of low water consumption washing machines is now available. These horizontal axis machines use about 20 gallons of water per load instead of the 43-60 gallons used by top loading machines. And they use substantially

less electrical power. If the Park Service required the use of this type of washing machine, substantial water and energy savings would result.

To date, no serious effort to conserve water has been made because there is no sense of urgency. As long as water is considered to be a renewable resource, there will be no reason to maximize conservation efforts. This attitude needs to be changed and the place to start is in the GMP.

#### IV. MISCELLANEOUS

A. A significant part of Tuwa Canyon was not included on the Wilderness Suitability map (p.131). Why was it left out? And part of your Wilderness Suitability area appears to lie within your "development zone." Seems to be a conflict there.

27

B. Night lighting is not adequately addressed in the GMP. The light at the Visitor Center is a real eyesore when you round Maverick Point at night. After driving for a long time in a unpopulated area, you are suddenly confronted with a bright light that is totally out of place with its surroundings. All lights in the Monument that are on at night should be shielded so that they only light the necessary area and are the minimum size necessary to do the job.

28

In conclusion, while the draft GMP addresses many appropriate issues, some of the most important ones such as visual resource protection and resource conservation are not adequately discussed and no commitments are made to improve efforts in these areas. I hope the final GMP will address these issues.

Sincerely,



c: Walt Dabney  
Regional Director

**24.** The Facility Design Guideline emphasizes that facilities will be compatible with the surrounding environment, but makes no limitation that only views from within the monument will be considered. For example, the “Color” section of this guideline includes a question on whether a new structure will be viewed from above or below.

**25.** The small portion of Tuwa Canyon was included because of the existing storage area for gravel and construction materials located there. The locations for the additional residence buildings that are proposed in the GMP have not been specifically determined yet. The larger zone gives more flexibility to locate these structures in the least sensitive areas.

**26.** The monument will follow the NPS sustainable design principles, which include guidance and policy for energy and water conservation as standard NPS policy, and Natural Bridges has and is still in the process of retrofitting facilities with energy and water conservation measures.

**27.** This portion of Tuwa Canyon was left out because of its proximity to the monument administrative area and because it includes an existing construction materials storage area. There is no overlap between the area suitable for wilderness and the development zone.

**28.** See response #10.

Owen Severance  
P.O. Box 1015  
Monticello, UT 84535

RECEIVED  
FEB 20 1996  
CANYONLANDS

February 16, 1996

Walt Dabney, Superintendent  
Southeast Utah Group  
National Park Service  
2282 S. West Resource Blvd.  
Moab, Utah 84532

Dear Walt,

I am enclosing a copy of my comments on the Draft GMP for Natural Bridges National Monument. As you can see, I am concerned about the continual degradation of the visual quality at Natural Bridges. Over the years I haven't seen any improvements - just a continual decline caused primarily by a lack of concern on the part of the Park Service about the overall appearance of the Monument. This GMP would be a good place to start reversing this decline. I hope that you will be the one who finally makes a commitment to change this attitude and start the Park Service on the path to reducing its negative visual impacts on the Monument.

Sincerely,







From: MELVIN J. FROST  
658 East 8th. Ave.  
Mesa, Az. 85204

9 January 1996

To: Steve W. Chaney, Superintendent  
Natural Bridges National Monument  
P. O. Box 1  
Lake Powell, Utah 84533 - 0101

Dear Mr. Chaney:

It was a pleasure to read the the "Draft Impact Statement" for the Natural Bridges National Monument which you sent to me.

I grew up in Monticello and go back there in the summers so am knowledgeable about San Juan County. While reading the document I had frequent occasions to remember and reflect on some of the occasions I had to visit the Natural Bridges. In 1937 I was with a group of Boy Scouts that went in a cattle truck to the "bridges" and again I went with a group of school kids. We camped at Zeke Johnson's headquarters, swam in the pool below Owachomo Bridge, hiked to the three bridges, and explored the cliff dwellings upstream from Sipapu Bridge. My family have enjoyed the camp grounds and hiked to all the bridges and I have been there with Chinese and Guatemalan visitors.

This is a wonderful attraction and place to go. I commend you and the Park Service for the care and management of this natural resource. The scenic loop road with overlooks and trails to the bridges is well designed for accessibility, convenience, and resource conservation. Now that the park is becoming well known some upgrading will be necessary to accomodate the increase traffic.

The Proposal, Alternate "B" is a good plan and will be good for the park. There must be some upgrading to provide for the increased patronage. It appears that the camp ground space should be increased even more than is proposed. Also, other overnite facilities near the park should be provided. My philosophy is that "conservation is the best use of the natural resources for the most people over the longest period of time without destroying the resource." It is a challenge to be a wise steward in protecting a natural resource and continue to make it available to crowds of people.

Sincerely,

A handwritten signature in dark ink, which appears to read "Melvin J. Frost". The signature is fluid and cursive, with a long horizontal line extending from the end.

Melvin J. Frost.



**APPENDIX B: PARK LEGISLATION****54. Natural Bridges National Monument**

	Page
Establishment: Proclamation (No. 804) of April 16, 1908.....	247
Boundaries enlarged: Proclamation (No. 881) of September 25, 1909.....	247
Redescribing boundaries: Proclamation (No. 1323) of February 11, 1916.....	249

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BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

**A PROCLAMATION**

[No. 804—April 16, 1908—35 Stat. 2183]

WHEREAS, a number of natural bridges situated in southeastern Utah, having heights more lofty and spans far greater than any heretofore known to exist, are of the greatest scientific interest, and it appears that the public interests would be promoted by reserving these extraordinary examples of stream erosion with as much land as may be necessary for the proper protection thereof;

Now, THEREFORE, I, Theodore Roosevelt, President of the United States of America, by virtue of the power in me vested by section two of the Act of Congress approved June 8, 1906, entitled "An Act for the Preservation of American Antiquities," do hereby set aside as the Natural Bridges National Monument, subject to any valid interest or rights, at and surrounding each of the natural bridges located on the White Canyon and tributaries, in San Juan County, State of Utah, by common report named by Horace J. Long as Augusta Bridge, Caroline Bridge and the Little Bridge, forty acres in square form with side lines running north and south and east and west equidistant from the respective centers of said bridges.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure or destroy any of the natural bridges hereby declared to be a National Monument, nor to locate or settle upon any of the lands reserved and made a part of said Monument by this proclamation.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 16th day of April in the year of our Lord one thousand nine hundred and eight, and of the [SEAL] Independence of the United States the one hundred and thirty-second.

THEODORE ROOSEVELT.

By the President:

ROBERT BACON.

*Acting Secretary of State.*

---

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

**A PROCLAMATION**

[No. 881—Sept. 25, 1909—36 Stat. 2502]

WHEREAS, the Natural Bridges National Monument, embracing three extraordinary natural bridges, together with forty acres of land around each bridge, was created by Proclamation of the President, dated April 16, 1908, and

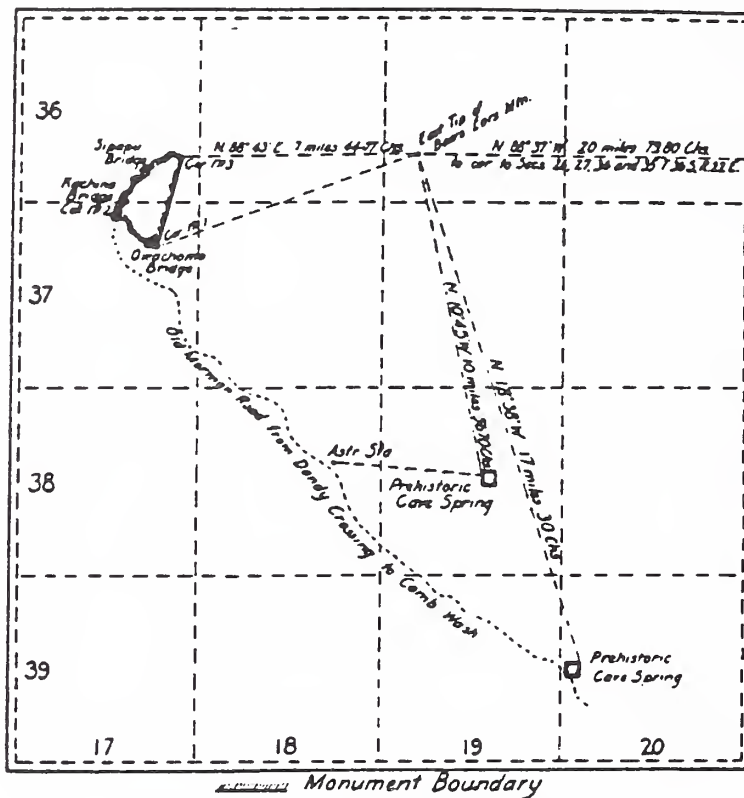
248

## VIII. NATIONAL MONUMENTS—NATURAL BRIDGES

# NATURAL BRIDGES NATIONAL MONUMENT

*Embracing a Sub-Triangular tract in unsurveyed Townships 36 and 37 South, Range 17, and two smaller tracts, one each in Township 38 South Range 19, and Township 39 South, Range 20, all East of the Salt Lake Meridian.*

## UTAH



DEPARTMENT OF THE INTERIOR  
GENERAL LAND OFFICE  
Fred Dennett, Commissioner.

WHEREAS, at the time this monument was created nothing was known of the location and character of the prehistoric ruins in the vicinity of the bridges, nor of the location of the bridges and the prehistoric cave springs, also hereby reserved, with reference to the public surveys, the same being many miles from surveyed land;

NOW, THEREFORE, I, William H. Taft, President of the United States



## VIII. NATIONAL MONUMENTS—NATURAL BRIDGES 249

of America, by virtue of Section two of the Act of Congress approved June 8, 1906, entitled, "An Act for the Preservation of American Antiquities", do hereby set aside as the Natural Bridges National Monument, subject to any valid existing right, one surveyed sub-triangular tract of land in unsurveyed townships thirty-six and thirty-seven south, range seventeen, containing about two thousand four hundred and twenty acres, and embracing said natural bridges and principal prehistoric ruins, and two smaller square tracts embracing the cave springs and containing one hundred and sixty acres each, located one in unsurveyed township thirty-eight south, range nineteen, and one in unsurveyed township thirty-nine south, range twenty, all east of the Salt Lake Meridian, Utah, and shown upon the diagram hereto attached and made a part of this proclamation.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure or destroy any of the objects hereby declared to be a National Monument, nor to settle upon any of the lands reserved and made a part of said Monument by this proclamation.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this 25 day of September in the year of our Lord one thousand nine hundred and nine and of the [SEAL] Independence of the United States the one hundred and thirty-fourth.

WM. H. TAFT.

By the President:

ALVEY A. ADEE,  
*Acting Secretary of State.*

---

BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

### A PROCLAMATION

[No. 1323—Febr. 11, 1916—39 Stat. 1764]

WHEREAS, the Natural Bridges National Monument, embracing three extraordinary natural bridges, together with forty acres of land around each bridge, was created by proclamation of the President, dated April 16, 1908, and

WHEREAS, at the time this monument was created nothing was known of the location and character of the prehistoric ruins in the vicinity of the bridges, nor of the location of the bridges and the prehistoric cave springs, also hereby reserved, with reference to the public surveys, the same being many miles from surveyed land, and

WHEREAS, the three several tracts embraced within this monument reservation have been resurveyed and relocated with reference to the recently established corner of the public land surveys, to the end that their location has been definitely fixed.

NOW, THEREFORE, I, Woodrow Wilson, President of the United States of America, by virtue of Section two of the Act of Congress approved June 8, 1906, entitled, "An Act for the Preservation of American Antiquities", do hereby set aside as the Natural Bridges National Monument, subject to any valid existing right, one surveyed sub-triangular tract of land in unsurveyed townships thirty-six and thirty-seven south, range seventeen, containing about two thousand four hundred and twenty acres, and embracing said natural

## 250 VIII. NATIONAL MONUMENTS—NATURAL BRIDGES

bridges and principal historic ruins, and two smaller square tracts embracing the cave springs and containing one hundred and sixty acres each, located, one in sections one and two, township forty south, range nineteen, and one in unsurveyed townships thirty-nine south, ranges nineteen and twenty, all east of the Salt Lake meridian, Utah, and shown upon the diagram hereto attached and made a part of this proclamation.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure or destroy any of the objects hereby declared to be a National Monument, nor to settle upon any of the lands reserved and made a part of said Monument by this proclamation.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the seal of the United States to be affixed.

DONE at the City of Washington this eleventh day of February, in the year of our Lord one thousand nine hundred and sixteen and [SEAL] of the Independence of the United States the one hundred and fortieth.

WOODROW WILSON.

By the President:

ROBERT LANSING,

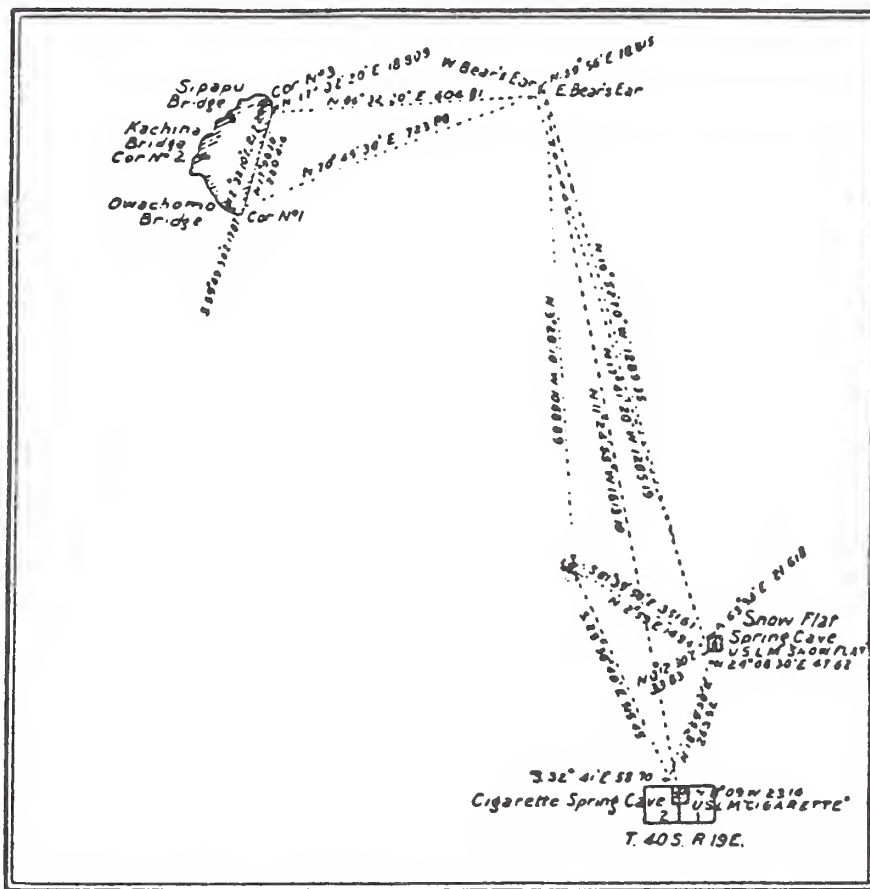
*Secretary of State.*

## VIII. NATIONAL MONUMENTS—NATURAL BRIDGES

251

THIRD PROCLAMATION  
**NATURAL BRIDGES  
 NATIONAL MONUMENT**

*Embracing a Sub Triangular tract, one small tract  
 in unsurveyed area and one tract in Secs 1 and 2,  
 T. 40 S. R. 19 E. Salt Lake Meridian.*

**UTAH**

*Monument Boundary*

DEPARTMENT OF THE INTERIOR  
 Franklin K. Lane, Secretary  
 GENERAL LAND OFFICE  
 Clay Tallman, Commissioner

76 STAT.] PROCLAMATION 3486—AUG. 14, 1962

1495

**Proclamation 3486****MODIFYING THE NATURAL BRIDGES NATIONAL MONUMENT, UTAH****By the President of the United States of America**August 14, 1962**A Proclamation**

WHEREAS the Natural Bridges National Monument, Utah, established by Proclamation No. 804 of April 16, 1908, and modified by Proclamation No. 881 of September 25, 1909, and Proclamation No. 1323 of February 11, 1916, was reserved and set apart for the preservation and protection of three extraordinary natural bridges and certain surrounding prehistoric ruins and cave springs; and

35 Stat. (Pt. 2)  
2183.  
36 Stat. (Pt. 2)  
2509.  
39 Stat. (Pt. 2)  
1764.

WHEREAS it appears that it would be in the public interest to add to such monument approximately five thousand two hundred and thirty-six acres of land near the present boundaries which contain additional cliff-type prehistoric Indian ruins and suitable space for construction of a visitor center, administrative offices, employee residences, utility and maintenance facilities, and a new entrance road; and

WHEREAS it also appears that it would be in the public interest to exclude from the monument approximately three hundred and twenty acres of land, known as Snow Flat Spring Cave and Cigarette Spring Cave, which no longer contain features of archeological value and are not needed for the proper care, management, protection, interpretation, and preservation of the monument;

NOW, THEREFORE, I, JOHN F. KENNEDY, President of the United States of America, by virtue of the authority vested in me by Section 2 of the Act of June 8, 1906, 34 Stat. 225 (16 U.S.C. 431), do proclaim as follows:

Subject to any valid interest or rights, the lands now owned by the United States within the exterior boundaries of the following described tracts of land, which include the additional lands needed for the purposes stated above, shall constitute the Natural Bridges National Monument; and lands owned by the State of Utah within such boundaries shall become a part of that monument upon acquisition of title thereto by the United States:

**SALT LAKE MERIDIAN, UTAH****T. 36 S., R. 17 E.**sec. 25, E $\frac{1}{2}$  and SW $\frac{1}{4}$ sec. 26, SE $\frac{1}{4}$  and E $\frac{1}{2}$ SW $\frac{1}{4}$ sec. 34, E $\frac{1}{2}$ NE $\frac{1}{4}$ , SW $\frac{1}{4}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ , and SE $\frac{1}{4}$ SW $\frac{1}{4}$ 

all of sections 35 and 36

**T. 36 S., R. 18 E.**

all of sections 30 and 31

**T. 37 S., R. 17 E.**

all of sections 1, 2, and 3

sec. 4, E $\frac{1}{2}$ sec. 10, E $\frac{1}{2}$  and N $\frac{1}{2}$ NW $\frac{1}{4}$ 

all of section 11

sec. 12, NW $\frac{1}{4}$ sec. 14, N $\frac{1}{2}$ sec. 15, E $\frac{1}{2}$ NE $\frac{1}{4}$ **T. 37 S., R. 18 E.**sec. 6, NW $\frac{1}{4}$



The following-described lands in the State of Utah are hereby excluded from the Natural Bridges National Monument:

SALT LAKE MERIDIAN, UTAH

*Cigarette Spring Carr*

T. 40 S., R. 10 E.

sec. 1, Portions of NW  $\frac{1}{4}$  and N  $\frac{1}{2}$  SW  $\frac{1}{4}$   
(exclusive of lots 5, 6, 7, 8, and 9)

sec. 2, Portions of E  $\frac{1}{2}$  NE  $\frac{1}{4}$  and NE  $\frac{1}{4}$  SE  $\frac{1}{4}$   
(exclusive of lots 5, 6, and 7)

*Snow Flat Spring Carr*

T. 39 S., R. 10 E.

sec. 12, SE  $\frac{1}{4}$  SE  $\frac{1}{4}$

sec. 13, NE  $\frac{1}{4}$  NE  $\frac{1}{4}$

T. 39 S., R. 20 E.

sec. 7, SW  $\frac{1}{4}$  SW  $\frac{1}{4}$

sec. 18, NW  $\frac{1}{4}$  NW  $\frac{1}{4}$

The public lands hereby excluded from the monument shall not be subject to application, location, settlement, entry, or other forms of appropriation under the public-land laws until further order of an authorized officer of the Department of the Interior.

The Natural Bridges National Monument shall be administered pursuant to the Act of August 25, 1916, 39 Stat. 535 (16 U.S.C. 1-3), and acts supplementary thereto and amendatory thereof.

Warning is hereby expressly given to all unauthorized persons not to appropriate, injure, destroy, or remove any of the features or objects of this monument and not to locate or settle upon any of the lands reserved by this proclamation.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

DONE at the City of Washington this fourteenth day of August in the year of our Lord nineteen hundred and sixty-two, and of the Independence of the United States of America the one hundred and eighty-seventh.

JOHN F. KENNEDY

By the President:

DEAN RUSK,  
*Secretary of State.*

UNITED STATES  
DEPARTMENT OF THE INTERIOR

RETYPE COPY

CODE OF FEDERAL REGULATIONS  
TITLE 43--PUBLIC LANDS: INTERIOR

CHAPTER 1--BUREAU OF LAND MANAGEMENT  
APPENDIX--PUBLIC LAND ORDERS

PUBLIC LAND ORDER 3352

(Utah 0118454)

UTAH

WITHDRAWING LANDS FOR ACCESS ROAD TO NATURAL BRIDGES  
NATIONAL MONUMENT, AND FOR PROTECTION OF SCENIC AND  
RECREATION VALUES

By virtue of the authority vested in the President, and  
pursuant to Executive Order No. 10355 of May 26, 1952, it is  
ordered as follows:

Subject to valid existing rights, the following-described  
public lands are hereby withdrawn from all forms of appropriation  
under the public land laws, including the mining but not the  
mineral leasing laws, for the establishment of an access road to  
the Natural Bridges National Monument, and for protection and  
preservation of scenic and recreation values:

Salt Lake Meridian

A strip of land 200 feet wide on either side of the center-  
line of an approach road connecting to Utah State Road 95,  
and traversing the following-described lands:

T. 37 S., R. 18 E., Partly surveyed;  
Unsurveyed:  
sec. 3, NW $\frac{1}{4}$ SW $\frac{1}{4}$ , S $\frac{1}{2}$ SW $\frac{1}{4}$  and SW $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
sec. 4, NW $\frac{1}{4}$ NW $\frac{1}{4}$ , S $\frac{1}{2}$ NW $\frac{1}{4}$ , NE $\frac{1}{4}$ SW $\frac{1}{4}$ , N $\frac{1}{2}$ SE $\frac{1}{4}$  and SE $\frac{1}{4}$ SE $\frac{1}{4}$ ;  
sec. 5, N $\frac{1}{2}$ N $\frac{1}{2}$ ;  
sec. 10, NE $\frac{1}{4}$ , NE $\frac{1}{4}$ NW $\frac{1}{4}$  and NE $\frac{1}{4}$ SE $\frac{1}{4}$ .

Containing approximately 175 acres.

Land Office, Salt Lake City, Utah

Utah 0118454

The withdrawal made by this order does not alter the applicability of the public land laws governing the use of the lands under lease, license, or permit, or governing the disposal of their mineral and vegetative resources other than under the mining laws.

/s/ John A. Carver, Jr.

March 23, 1964

Assistant Secretary of the Interior

5/10/76 Sec 36, T36S,R17S deleted because it  
has been exchanged to  
the BLM.

Right of Way No. 856

CORRECTION GRANT OF EASEMENT

State Exchange No. 90

U 2154

WHEREAS, by easement dated July 17, 1963, recorded July 30, 1963 in Book 357, at Pages 597-599 of the records of San Juan County, Utah, the STATE OF UTAH, acting by and through the Utah State Land Board, Grantor, conveyed to the UNITED STATES OF AMERICA and its assigns, Grantee, among other things, an easement for a road across the SE<sup>1</sup> of Section 36, T. 36 S., R. 17 E., Salt Lake Meridian, and more particularly described in said conveyance as Right of Way No. 856 on map marked NM-NB-7105, referenced to Bureau of Public Roads Survey Stations 278 + 09.57 and 296 + 09.24 in said Section 36, and

WHEREAS, in said conveyance dated July 17, 1963, that portion of Right of Way No. 856 located in the SE<sup>1</sup> of Section ~~36~~ <sup>36</sup>, Salt Lake Meridian, was incorrectly described, and no road has been constructed by the United States of America and its assigns on said route, and

WHEREAS, the easement intended to be conveyed is located in ~~Section 36~~ <sup>Section 36</sup>, Salt Lake Meridian, and is correctly described as delineated on the map attached hereto and described as NM-NB-7107 referenced to Bureau of Public Roads Survey Station 25 + 62, Station 43 + 62 and Station 459 + 07.84;

NOW, THEREFORE, the State of Utah, acting by and through the Utah State Land Board, in consideration of the public benefits to be derived from the construction of a road within Natural Bridges National Monument, and to correct the part of the description in that certain conveyance of an easement for a road in Section 36, T. 36 S., R. 18 E., Salt Lake Meridian, and dated July 17, 1963, recorded July 30, 1963 in Book 357, at Pages 597-599 of the records of San Juan County, Utah, hereby grants to the United States of America and its assigns, a right-of-way easement 400 feet wide (200 feet on each side of the centerline) for construction, operation and maintenance of a road over and across ~~Section 36, T. 36 S., R. 17 E.~~ <sup>Section 36, T. 36 S., R. 18 E.</sup>, Salt Lake Meridian, along a route shown and delineated on the map attached hereto and hereby made a part hereof, marked NM-NB-7107 reference to Bureau of Public Roads Survey Station 25 + 62, Station 43 + 62 and Station 459 + 07.84.

IN WITNESS WHEREOF, the said Grantor has caused these presents to be executed this 24th day of November 1964, by the Director of the State Land Board, duly authorized by a resolution of said Board dated September 1, 1961.

STATE OF UTAH  
STATE LAND BOARD

B. 370  
P. 31

NABR D-4

01-102



ACKNOWLEDGMENT

STATE OF UTAH        )  
                          ) ss  
COUNTY OF         )

On this 24th day of November 1964, personally appeared  
before me MAX C. GARDNER, who being by me duly sworn did say  
that he is the Director of the State Land Board of the State of Utah, and  
said instrument was signed in behalf of the State of Utah by authority of a  
resolution of the State Land Board and said MAX C. GARDNER acknowledged  
to me that the State of Utah executed the same.

[Signature]  
Notary Public

My Commission Expires 4-10-68.

APPROVED AS TO FORM:  
A. FRATT KESLER  
ATTORNEY GENERAL  
By [Signature]

## APPENDIX C: PLAN FOR INTERPRETATION

(Prepared by the Division of Interpretation, Resource Management and Visitor Protection, Natural Bridges National Monument, and the Division of Interpretation, Rocky Mountain Regional Office.)

### Introduction

#### THE PARK IN PERSPECTIVE

*"The three bridges are so different in design and appearance that it is difficult to say that one excels another. It is like comparing the different orders of architecture, each of which impresses one with an individual beauty .... Interesting as are the great natural bridges, this interest is much enhanced by the presence of the ruined homes of the Cliff Dwellers, whose age still defies the ingenuity of the archeological chronologist, and whose culture remains unaccounted for."*

William B. Douglass

(Field note of survey of reservation embracing Natural Bridges National Monument, September 12 to October 3, 1908.)

William Douglass's quote captures the essence of Natural Bridges National Monument and the reason for which it was set aside. Natural Bridges is Utah's oldest national park area. It was created to preserve three extraordinary natural bridges and prehistoric archeological sites. The first enabling legislation for the park was on April 16, 1908: President Theodore Roosevelt's proclamation number 804, 35 Stat. 2183. A year later, on September 25, 1909, President Taft's Proclamation number 881, 36 Stat. 2502, gave protection to the prehistoric Indian ruins in the vicinity of the three bridges.

Natural Bridges National Monument contains 7,636 acres 40 miles west of Blanding, Utah. The park is part of the Southeast Utah Group (SEUG), which also includes Arches National Park and Canyonlands National Park. The SEUG superintendent is stationed at headquarters in Moab, Utah, 120 miles north of Natural Bridges. The current superintendent of Natural Bridges resides in the town of Monticello, about 60 miles distant from the park. The SEUG parks lie in the heart of the Colorado Plateau. Along with nearby Capitol Reef National Park, Glen Canyon National Recreation Area, Manti-LaSal National Forest, and the Bureau of Land Management's San Juan Resource Area, they encompass some of the wildest and most stunning scenery in the world. Although each of the SEUG parks preserves a segment of spectacular red rock desert, each offers visitors a different experience. Natural Bridges is the smallest member of the SEUG. It is not as well known as Arches or Canyonlands and is farther from main travel routes; consequently, it is less heavily visited. Its higher elevation makes it a pleasant place to visit even in midsummer, when other Colorado Plateau parks are uncomfortably warm.

There is one road into the park from Utah 95. This drive affords a sweeping view across heavily forested Cedar Mesa, as far south as Navajo Mountain and Monument Valley. This vista evokes a feeling of great space and remoteness from civilization, setting the mood for a visit to the park. After entering the park, the road leads to the visitor center and the campground—but the main attraction is, of course, the natural bridges. A one-way, 9-mile scenic loop road leads visitors to viewpoints overlooking the three

bridges, and to trailheads accessing the canyon bottom and the bridges themselves. No overnight camping is allowed in the backcountry because of the cultural sites within the canyon, the fragile soil and vegetation in the narrow canyon bottom, and frequent flash flooding.

Although remote, Natural Bridges can be experienced in an appealing variety of ways. Visitors can drive the loop road and stop to enjoy several overlooks without having to venture more than 600 feet from the car. Or they can hike trails into the heart of the park, encountering few others. Both experiences elicit enthusiastic comments from visitors. Each person's response to the Natural Bridges experience is unique, but all seem to share a sense of wonder about the landscape and the natural forces that formed it, as well as about the traces left by prehistoric human residents. In addition, visitors often remark on the natural quiet, the sharpness of the night skies, and the sense of solitude they experience while visiting.

The overall goals of interpretation at Natural Bridges are threefold: to assure visitors an enjoyable and safe experience; to help them understand the significance of and interrelationships between the park's geologic, natural, cultural, recreational, and scenic resources; and to arouse in them a desire to protect the park and its resources. This Plan for Interpretation focuses on the accomplishment of those goals.

### *THE PLANNING CONTEXT*

The Statement for Management for Natural Bridges National Monument provides much of the background information and direction for the General

Management Plan (GMP) and this Plan for Interpretation, which are being written concurrently. "Natural Bridges National Monument, Utah: An Evaluation of Present Interpretation; An Interpretive Plan for the Future," written in 1978 to guide park interpretive efforts, has long been outdated. Some of the concepts from that earlier plan are retained in this plan, but many changes have been made to reflect the changes in visitation and management emphasis that have occurred since 1978.

The General Management Plan gives direction to overall development of the park. It identifies the desired visitor experience and interpretive themes, goals, and objectives; and includes a general discussion of development of interpretive facilities, services, and media. The Interpretive Plan fleshes out the interpretive proposals identified in the GMP, providing more detailed interpretive media development proposals, including cost estimates, to guide park staff in interpretive planning. The plan addresses current conditions. It should be reviewed periodically for continued relevance, and be updated as needed.

A new comprehensive planning system for interpretation is now being developed throughout the National Park Service. The intent of this system is to put more effort into creating a long-range vision for park interpretation and to greatly simplify the annual planning process. It provides both long-range and short-range views, and deals with all media, including personal services. The principal sections of the Comprehensive Interpretive Plan are: the Long Range Interpretive Plan, the Annual Interpretive Plan (replaces the Annual Statement for Interpretation), and the



Interpretive Data Base. The information contained in the present Plan for Interpretation will ultimately be incorporated into the new Comprehensive Interpretive Plan for the park.

Other documents important to understanding Natural Bridges and providing guidance for detailed interpretive planning include the Resource Management Plan and a variety of natural and cultural history documents and publications listed in the bibliography for the GMP and in the Statement for Interpretation.

### ***SUMMARY OF PLANNING CONCEPTS AND CONSIDERATIONS***

The following concepts should help guide efforts in planning a comprehensive and imaginative interpretive program through this plan and the Statement for Interpretation:

1. Natural Bridges and the rest of the Colorado Plateau are undergoing rapidly increasing visitor use. Planning, development, and operations need to be coordinated with other agencies and allied interests to keep pace with growing numbers of visitors and increasing interest in the Colorado Plateau.
2. The interpretive program at Natural Bridges should weave the themes of geology, natural history, and cultural history together in context with the park's location on the Colorado Plateau to present the concepts of a "total park" and "total environment." It should also help visitors see themselves as part of this environment.
3. Interpretation is an integral part of the cultural and natural resource management program, as well as a public-use activity.
4. The interpretive program must meet the needs of a broad, diverse public, composed of people with differing backgrounds, interests, physical abilities, and time available.
5. Interpretive programs and media will be developed in a manner compatible with the small scale and the setting of the park, and will not intrude inappropriately upon the scenic and natural resources.
6. Although each of the resources at Natural Bridges—the bridges, the geology of the area, the archeology, the natural resources, the scenery, and the opportunities for recreation—is outstanding in its own right, it is essential to communicate the concept that each is an interconnected part of a whole story. This story must not end at the park boundary, or cease to be relevant once visitors leave the park. Natural Bridges National Monument is only a small piece of the Colorado Plateau, which in turn is only a small part of a total environment, affected by the choices that we as a society make. It is incumbent upon the interpretive program to communicate the values of the park's resources, the National Park Service mission to preserve them, and the resource management programs necessary to accomplish this mission.

### ***Resources and Area Significance***

#### ***NATURAL RESOURCES***

Natural Bridges National Monument has the greatest concentration of natural stone bridges in the world. Of the major natural bridges in the United States, Sipapu is the second largest, and Kachina the fifth.

The park is a spectacular section of the Colorado Plateau under various stages of attack by the forces of erosion: rain, wind, ice, snow, gravity,



and flowing water. The three bridges in the park represent three stages of erosional development, and there are two areas that show evidence of collapsed bridges.

The climate in the park and adjacent part of Cedar Mesa is characterized by hot, dry summers and cold winters. The average annual precipitation is 13 inches. Despite the arid climate and the fact that a large percentage of the land surface is bedrock, there is a surprising amount of vegetation. Dense piñon-juniper forest cloaks most of the plateau, with pockets of ponderosa pine, spruce, and fir growing in more shaded locations. Lush riparian vegetation, including cottonwood, willow, box-elder, and oak, grows along the bottom of White Canyon and at the location of springs and seeps. A variety of fauna inhabits each of these environments, the most commonly seen being birds, rodents, rabbits, mule deer, snakes, and lizards. Also present, but seldom seen, are the more elusive coyote, kit fox, grey fox, badger, bobcat, and mountain lion.

### *CULTURAL RESOURCES*

Like all of Cedar Mesa, Natural Bridges has an amazing wealth of archeological sites. The area was occupied from about A.D. 1 to A.D. 1300 by Anasazi Indians spanning the Basketmaker II through Pueblo III periods. Discoveries in surrounding parts of Cedar Mesa suggest that the earliest prehistoric occupation dates of Natural Bridges could have been as early as 7,000 years ago. However, documentation of Archaic occupation within the park does not exist. More recent occupation by Ute, Paiute, and Navajo people is probable, but also not documented.

Of the more than 200 documented prehistoric sites within the park, only two are identified on maps and interpreted: Horse Collar Ruin, and Ka-china Bridge Ruin and petroglyphs. Visitation to other sites is discouraged because of their fragile nature and because of the lack of on-site staff to protect them. Illegal pot-hunting and deliberate vandalism to archeological sites have long been serious problems at Natural Bridges and throughout the Colorado Plateau. The public's growing fascination with Southwestern archeology has compounded the problem by drawing increasing numbers of well-intentioned, but sometimes careless, visitors to easily damaged sites.

### *SCENIC RESOURCES*

The drive into the park affords dramatic, sweeping views of Cedar Mesa and the White Canyon drainage. The view extends south as far as Monument Valley and Navajo Mountain. The loop road within the park follows the rim of White Canyon and Armstrong Canyon, which slice through Cedar Mesa, presenting a panorama of wildly eroded red, pink, and white banded sandstone against a backdrop of wooded plateaus and high mesas. From viewpoints along this road, visitors can see each of the three natural bridges. A hike into White and Armstrong Canyons offers close-up views of the bridges and canyon walls, as well as glimpses of ruins and rock art, and an opportunity to experience the canyons on a more intimate level.

### *RECREATION RESOURCES*

The park offers excellent opportunities for automobile sightseeing along the loop road. Bicycling is becoming increasingly popular as well. Picnicking is available on the loop drive, in the

campground, and at the visitor center. A 13-site campground offers primitive camping. Visitors often use this campground as a base from which to explore nearby areas on Cedar Mesa, as well as the park itself.

Trailheads access the bottom of White and Armstrong Canyons and the mesa top, providing opportunities for hikes ranging from 2 or 3 hours to a full day. Overnight camping is permitted only in the campground.

*Publics and Visitor Use*

*INTRODUCTION*

Natural Bridges National Monument is located far away from any urban amenities. Despite its remoteness—or in some cases because of it—a steadily growing number of people come to visit the park. These visitors are diverse, and have a variety of backgrounds and expectations. A visitor survey conducted in 1991 indicated the following:

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Breakdown by age:

7% children	0-2 years
9% teenagers	13-7 years
60% adults	18-61 years
24% senior citizens	62+ years

Breakdown by group affiliation:

7% alone	non-associated individuals
29% peer group	unrelated people about the same age
2% organized group	people traveling together
51% family group	people related by blood
6% multiple families	reunions, more than one family, etc.
1% others	unknown composition

Breakdown by special population membership:

Less than 1%	individuals with disabilities
2%	minorities (mostly Native Americans)

Breakdown by point of origin:

7% local residents	Blanding, Monticello, Bluff, Mexican Hat, Monument Valley, Montezuma Creek
14% regional Residents	living within a 2-3 hour drive
59% national	U.S. citizens from outside the area
*20% international	visitors from other countries

\*Note: the staff believes that this is the fastest growing segment of visitors and likely represents at least 25% of our current visitation.

Breakdown of destination/duration of stay:

9% home base day users	visitors who return home the same day
91% through visitors	park is one stop along the way
95% day use only	average length of stay is 2-3 hours
4% overnight use	stay one night, then leave
1% extended stay	park is primary destination or base of operations for 2 or more nights

Breakdown of activity and area/facilities used:

5%	incidental to park's primary resources
85%	based on park's primary resources
10%	dependent on park's primary resources
less than 1%	adverse to park's primary resources

Breakdown by interpretive program use:

80%	use information/orientation or non-personal-services only
2%	attend personally conducted or presented services
*18%	non-program users

\*Note: staff believes that the number of non-program users has decreased with the addition of wayside exhibits along the loop drive.

The results of this survey combined with more recent visitation data and the observations of park staff suggest that the fastest growing segment of our visitor population is the international visitor. This has implications both for the development of interpretive printed materials and cooperating association sales items. German-and-French-speaking visitors make up the bulk of international visitation.

The number of overnight users has been steadily increasing as well. In

1994 a camping fee was instituted, with a self-service fee collection kiosk at the campground. Despite the new charge, would-be users outnumbered sites available from April through October.

Staff have observed a shift in visitation patterns—particularly in return visitors. Most visitors still tend to be “through-visitors,” who spend 1 to 2 hours in the park. However, it appears that increasing numbers of return visitors are spending a full day to several days



hiking to favorite spots or discovering new places within or bordering the park. Multiple overnight stays in the campground are increasing. Many multiple night campers are using Natural Bridges as a base for exploring the Cedar Mesa area. A comprehensive interagency plan for expanded overnight services is needed for Cedar Mesa.

Visitation occurs throughout the year, but the most popular time is April through October, when the weather is most pleasant. Visitation peaks during May and June, and again in September. The shoulder season has been steadily expanding into March and November. Visitation during the summer months does not slacken dramatically; March through October is one unbroken "busy season."

Tuesdays through Thursdays tend to have higher visitation than other days of the week. This may be because many people visit Natural Bridges while on their way to other destinations, or as part of a circle loop tour of the Southwest/Four Corners area. Visiting the park mid-week would coincide with arrival at another location—perhaps a final destination—on the weekend. Daily visitation is highest from 10 a.m. through 2 p.m., and again around 4:30 p.m.

### *SPECIAL POPULATIONS*

By its very nature, Natural Bridges poses numerous access challenges for visitors with disabilities. Uneven, rocky terrain along the canyon rim, sheer cliffs, and very steep trails make access to the canyon bottom difficult or impossible for many people with physical impairments. None of the viewpoint trails meet standards for wheelchair access, although all are currently being used by visitors in wheelchairs. Current waysides were planned and designed with the needs of people with mobility, visual, hearing, and mental impairments in mind. Modifications have been made to curbs and sidewalks to make them accessible.

Because the terrain will prevent special populations from having physical access to a large portion of the park, it is particularly important that media development have their unique needs in mind. The current exhibit rehabilitation plan takes this into account. When the AV program at the visitor center is redesigned, closed captioning needs to be incorporated.

The U.S. Forest Service "Skyway" project—which will create accessible recreational experiences throughout southwest Colorado for people with disabilities—will have implications for meeting the needs of special populations within the Four Corners region. Natural Bridges can expect an increase in the numbers of visitors with mobility, visual, hearing, or mental impairments. Interpretive programs, facilities, and media must be developed to be accessible to these groups.



## **CONCLUSIONS FOR INTERPRETATION**

The makeup of visitors and their needs and desires will undoubtedly change due to a number of factors. The middle-aged and elderly-age class of the American population will continue to swell as "baby boomers" fill the ranks of the middle-aged, and medical advances continue to prolong productive lives. Heightened standards of living abroad and international monetary policies will create conditions favorable for increased international travel to this country. Organized tours will benefit from both trends mentioned above. Increased pressures on camping availability will necessitate a regional interagency planning approach. Non-personal-services interpretation will be the primary means of orienting, regulating, and educating the public. Personal-services interpretation will need to be more time-limited and more flexible to anticipate the needs of organized tours and time-limited visitors.

At the same time, however, consideration of longer, interpreter-led activities may be more appropriate for elder hostel groups and school children. Accessibility will become even more important due to an aging population. The primary emphasis of the interpretive facilities, media, and programs should be on providing information and orientation for day users.

Interpretive information should be "tiered," offering different levels of information to accommodate visitors' differing interests, learning styles, physical abilities, and time available.

## **Influences and Other Considerations**

Natural Bridges National Monument is in a remote, largely undeveloped part

of southeastern Utah. Most of southeastern Utah is federal land administered by the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), and the National Park Service (NPS). The closest community to the park (40 miles) is Blanding, Utah (population 3,162).

## **INTERNAL INFLUENCES AND CONSIDERATIONS**

The General Management Plan calls for an increase in both staffing and housing. Both will be needed to allow for any significant expansion of personal-services interpretation. Given the nature of visitation, however, the bulk of the interpretive message will continue to be communicated through non-personal services. It is imperative that all media be designed to do this as effectively as possible. To this end, 13 wayside exhibits have been placed at appropriate interpretive opportunities along Bridge View Drive. An auto tour guide has been written and is scheduled for publication through the cooperating association for the 1995 summer season. In addition, park staff, along with design planners, completed a major exhibit rehabilitation plan for the visitor center in 1994. Fabrication and installation of exhibitry should occur in 1995. Work will progress on the development of a new, more effective audiovisual program for presentation in the visitor center auditorium. This new program will be closed-captioned for visitors with hearing impairments.

The General Management Plan calls for an expansion of office/administrative space, and the sales area at the visitor center, but the square footage of the interpretive section of the building will remain the same. Natural Bridges is a small park,

with no alternative site for a new, larger visitor center. This means that interpretive media will be designed to make more efficient and effective use of existing space.

Wayside exhibits will be limited to the developed corridor only. To preserve the primitive character of the backcountry, any interpretation done there will be by means of publications or personal services.

### *EXTERNAL INFLUENCES AND CONSIDERATIONS*

The relationship between the National Park Service, local communities, and state and local governments has traditionally been strained—often characterized by a lack of coordination of efforts regarding the issue of how to best serve the visiting public. The NPS mission to preserve and protect park resources is viewed by some as an obstacle to the economic growth and well-being of the local communities. Over the last few years, park staff have made active outreach efforts to improve communication and cooperation with neighboring communities and agencies. This effort has been particularly enhanced by the superintendent's decision to reside off site in the town of Monticello and actively participate in community affairs. Cooperative law enforcement agreements with the San Juan County Sheriff's Department and the Bureau of Land Management have also been instrumental in breaking down barriers. A challenging part of the interpretive program at Natural Bridges is to communicate the NPS message and the value of park resources in a manner that protects the resource and treats park neighbors sensitively and tactfully.

The Utah Travel Council has been actively promoting tourism development

in southern Utah. Visitation has been increasing rapidly, stressing the inadequate facilities and staffing at Natural Bridges, and creating pressure to expand facilities.

The Utah Travel Council's promotional efforts have resulted in an increase in bus tours. There is adequate parking at the visitor center and along the loop road to accommodate buses and large recreational vehicles following major road construction in 1993; however, there is not enough staff to handle increased demand for personal services for passengers.

The Bureau of Land Management and the U.S. Forest Service are promoting intensive recreation use in southeastern Utah, but have not provided funding for managing and providing adequate facilities for the visitors they are attracting. Increasing numbers of visitors to surrounding public lands are using Natural Bridges for information services and camping.

BLM is exploring alternatives for building a visitor contact station near Kane Gulch to serve Grand Gulch visitors. If this becomes a reality, it will take some pressure off of Natural Bridges to provide information for the entire Cedar Mesa area, especially during the early spring season. It will also necessitate close interagency communication and cooperation in interpretive planning efforts and information dissemination.

### *Existing Conditions*

Natural Bridges has a combined Division of Interpretation, Resource Management, and Visitor Protection. There has never been a separate Division of Interpretation. Depending on staffing levels and other demands made upon existing staff at any given time, per-



sonal-services interpretation has ebbed and flowed. 1993 staffing has been adequate to schedule evening programs 5 nights a week, May through September, and provide some additional interpreter-led activities. They have been well attended. Roving interpreters have provided informal interpretation along the loop road. Personal services have also been concentrated on providing orientation and information at the visitor center. Of necessity, other interpretation occurs almost entirely by media, as mentioned below. The personal-services program is described in detail in the Annual Statement for Interpretation.

#### *EXISTING INTERPRETIVE FACILITIES AND MEDIA*

##### Visitor Center:

Upon entering the park, visitors are directed into the visitor center. In the lobby, they find interpretive/fee collection staff, exhibits, and publications that help orient and prepare them for their trip around the loop road. The cooperating association sales area is of adequate size, but is located along both sides of the corridor leading to the auditorium—an awkward arrangement that will become a bottleneck if visitation grows appreciably.

A 600-square-foot exhibit room contains a mix of 1960s vintage and home-made exhibits. These exhibits interpret the bridges, archeology, history, and natural history of the park. The treatment of these themes and the media used are outdated; however, an updated exhibit plan was completed in 1994, with construction and installation of new exhibitry slated for 1995.

The auditorium seats 30 people. A 6½ -minute sound/slide general orientation program is shown there. This

program is inadequate in its thematic development, content, and quality of sound and images. The view of the image is obstructed for viewers in the rear seats, and the program is not captioned. The projection room is used largely for storage, because no other storage space is available. The auditorium does not lend itself to use for evening programs, when the visitor center is closed, because there is no direct outside access.

The building itself is in good condition and of adequate size to accommodate present visitation and projected growth for the next 10 years. Problems with the public use section of the building are minor, and can be solved without expanding outside of the footprint of the building. However, office/administrative and storage space is very cramped, and there is no work space for seasonal employees. All parts of the visitor center are accessible to people with physical disabilities, and there is a wheelchair-accessible rest-room.

##### Wayside Exhibits:

Along the 9-mile, one-way loop road are numerous pullouts at significant viewpoints, at bridge overlooks, and at trailheads leading to the bridges in the canyon bottom. Thirteen fiberglass-embedded wayside exhibits are in place along the drive. These waysides offer basic trail orientation, interpretation of the formation of the bridges, the geology, the natural and human history, safety and regulatory information, and archeology.

Campground:

A 13-site primitive campground accommodates a small number of overnight users. It normally fills by late afternoon every day, from April through October. A kiosk and fee station near the entrance provide safety and resource protection information, as well as regulatory and fee information. On a bulletin board here and outside of the visitor center, interpretive activities schedules are posted.

Amphitheater:

A graveled trail leads from the campground to the amphitheater; it does not meet accessibility standards, and is difficult to follow in the dark. Assuming, however, that camping facilities will most likely be moved out of the park in the next 10 to 15 years, it is felt that permanent improvements that would result in significant resource impacts should not be added to this facility. The amphitheater is equipped with a free-standing screen and a metal projection booth, and is furnished with split-log benches, which seat 30 people. The facility is rustic, in keeping with the nature of the campground. On nights when the campground is full, it is not uncommon for people camping outside the park boundary to drive into the park to see a program. There is no designated parking to accommodate them.

Publications:

Basic orientation maps and information bulletins are available free of charge. German and French translations of this information are also available. A site bulletin on archeology and rock art and a site bulletin on hiking are available, as well as free handouts on geology, accessibility, and photovoltaics at Natural Bridges. In 1995, a

self-guiding auto tour guide will be printed by the cooperating association, followed by a hiking guide.

An area newspaper is currently being considered for publication through the park's cooperating association.

*Themes, Goals, and Objectives*

A Douglas-fir—holdover from a cooler, wetter time—clings tenaciously to its foothold in a shaded crevice. Nearby, a ribbon of water trickles over rock worn smooth by its passing. As the canyon snakes around a bend, a magnificent span of stone over 200 feet above the streambed first surprises—then delights—your eye with its symmetry. It intrigues your mind—its very existence defying gravity—for a time. This is Sipapu Bridge—the first of three massive sandstone bridges that you encounter at Natural Bridges National Monument. Sipapu—the world's second-highest natural bridge—takes its name from the Hopi word meaning “the portal of life.” It represents both beginning and end—entry and exit. How appropriate that your exploration should begin here!

Farther down canyon, Kachina Bridge, although not as high as Sipapu, is more massive. Kachina is a natural bridge in its youth. Situated at the junction of two stream-cut canyons, this bridge is still widening. As a canyon wren fills the air with its melodious song, nearby Anasazi ruins stand mute, reminding us that—with time—all things change.

Finally, the fragile span of Owachomo depicts a natural bridge in old age. The stream that carved it no longer flows beneath it. Such is the fickle nature of running water and time. Owachomo now stands beside its abandoned meander, awaiting the in-



evitable. Cycles of freezing and thawing, combined with chemical erosion, will slowly play out its life story.

Stand and breath deep the desert air. There's a calmness here, shared with ancient people of a bygone time. Their hand-prints grace canyon walls that no longer echo their lives. Just as rock bears evidence of the passing of water, so, too, does it proclaim the passing of civilizations.

These stories, written in the geology of natural bridges and the archeology of the ancients, capture our attention, for they speak of eternal truths. They help us develop a perspective larger than our own lives. In the silence and the solitude, we are better able to see what is important and of lasting value. And so it was that in 1908 President Theodore Roosevelt established Natural Bridges National Monument as Utah's first National Park Service Area.

### *THE VISITOR EXPERIENCE*

As the story above indicates, the visitor experience of Natural Bridges is multifaceted. Approaching the park from any direction, visitors sense the vast, open spaces separating Natural Bridges from any semblance of civilization. On this vast mesa is a deeply incised canyon, where the forces of erosion (primarily flowing water) have created three outstanding natural bridges. The presence of water has also created the conditions necessary for a diversity of plants and animals. This, in turn, allowed an ancient civilization to flourish amid an otherwise daunting high-desert environment. From the ruins of their buildings and the rock art that graces canyon walls, their presence can still be felt. Upon arrival, what is perhaps most noticeable to visitors is the stillness. A per-

vasive quietness emanates from the canyons below, overwhelming the senses, and replacing busyness with calm.

### *THEMES*

1. The Cedar Mesa area, of which Natural Bridges is but a part, is a landform characterized by deposition, crossbedding, and lithification of ancient sand dunes in conjunction with regional uplift of the Colorado Plateau. The process of erosion, by means of flowing water, has further sculpted the landscape into deeply incised canyons, entrenched meanders, and the natural bridges that give the park its outstanding character. This geologic theme includes the following topics:

- Deposition, crossbedding, and lithification of ancient wind-deposited sand to form the Cedar Mesa sandstone formation;
- Formation and uplift of the Colorado Plateau;
- The role of stream action in canyon formation;
- Erosion as a continuing geologic process;
- Geologic conditions necessary for natural bridge formation;
- The differences between arches, bridges, and windows—form and process;
- The inter-relationships that influence ecological setting; and
- Experiencing the park's scenic wonders.

2. A year-round water supply created the conditions necessary for prehistoric and historic human occupation and/or use of the canyons and mesa

top. The Anasazi, Utes, Paiutes, and Navajo, and Anglo cattlemen have all made use of the natural resources of this area. This theme includes the following topics:

- Ancient cultures, uses of the land;
- Ecological conditions that allowed for a food and fuel base;
- Importance of a dependable water resource in the desert;
- Historical American Indian uses of the area;
- Archeology—what can be learned from the ruins, rock art, and artifacts of ancient cultures; and
- Early exploration, and the cattle years.

3. Natural Bridges National Monument is an integral part of the Colorado Plateau, sharing common geological and ecological elements yet possessing unique, remote, and isolated habitats that support a variety of plant and animal interdependencies. This theme includes the following topics:

- The concept of Natural Bridges as a biological refugium;
- Excellent example of an isolated high-desert environment on the Colorado Plateau;
- Dependable water resources as a result of specific geology;
- Plant and animal adaptations to a desert environment;
- Diverse micro-habitats and relic species; and
- The composition of the Colorado Plateau ecosystem.

4. Natural Bridges was set aside to protect its natural, cultural, and scenic resources—preserving and protecting them for the enjoyment of present and future generations. The visiting public plays a significant role, along with management and other agencies, in ensuring the integrity of the larger ecosystem (the Colorado Plateau) of which Natural Bridges is a part. This theme includes the following topics:

- How visitors can minimize their impact when visiting Natural Bridges;
- Wise use of natural resources, including use of solar energy where applicable;
- Citizen input on Colorado Plateau land management issues and beyond;
- Establishment of Natural Bridges as Utah's first National Park Service area;
- The mission of the National Park Service; and
- Park research and its applicability to public interpretation.

## GOALS

- To provide visitors with initial site orientation and information, so that they can use them to plan a safe and rewarding park experience.
- To provide visitors, through appropriate visitor center media (exhibits, artifacts, AV) and services, with an initial overview of the significance of the three natural bridges; the high plateau country in which they are located; and the plants, animals, and people that have inhabited the area.
- To provide appropriate on-site media (waysides, handouts, self-

guiding publications) and personal services (campfire programs, patio talks, walks, and roving interpretation at overlooks and along trails) to enable visitors to fully experience, understand, and enjoy Natural Bridges and its context within the Colorado Plateau—at his or her own pace.

- To protect natural and archeological resources by careful selection and siting of interpretive activities and media, and by educating visitors about the need for, and their own role in, resource preservation.
- To offer visitors the opportunity to acquire free publications and/or purchase publications and other educational materials that will provide more in-depth interpretation of the park story and themes, as well as serve as mementos of their visit to Natural Bridges National Monument.
- To provide opportunities for non-English-speaking visitors and visitors with physical, sight, hearing, and mental impairments to experience, enjoy, and learn about the park and its significant resources.
- To make visitors aware of the mission of the National Park Service.
- To provide visitors with thoughtful alternatives to their present lifestyles that include re-cycling, use of renewable energy resources, the concept of responsible consumerism, and citizen input on land use planning.

## OBJECTIVES

### Visitors will:

- Be able to describe how natural bridges are formed.
- Understand that Natural Bridges is part of the larger ecosystem of the Colorado Plateau.
- Be able to explain how the Anasazi and other cultural groups once used (and in some cases still use) the area. They will be able to explain and demonstrate how to visit archeological sites without damaging them. Vandalism and disturbance of archeological sites will decrease.
- Recognize and avoid dangerous weather conditions and other hazards to their safety. The number of accident and search incidents will decrease.
- Be able to explain the significance of water in the desert, and its influence on the plants and animals found here.
- Be able to cite three examples of proper minimum-impact use of the park. Damage to natural resources will decrease.
- Consider how the lifestyle choices they make have influences beyond their own homes.
- Confirm that they received adequate orientation and basic information to enable them to use their time effectively.
- Confirm that they enjoyed their visit to Natural Bridges.
- Recognize that they are in a unit of the National Park System.



## *Interpretive Facility and Media Proposals*

### *VISITOR CENTER MODIFICATIONS*

#### Lobby Cooperating Association Sales Area:

Will be consolidated into one area by expanding along the north side of the building, adding space dedicated to sales.

#### Auditorium:

The Auditorium will be re-configured by removing the projection room and replacing it with a small enclosed booth large enough to accommodate a laser disk projection system and a 16mm movie projector.

#### Museum Exhibits:

Orientation maps and information panels in the lobby and behind the information desk will be re-designed in conjunction with the re-design of the interpretive exhibits.

Interpretive exhibits in the 600-square-foot exhibit room will be replaced by those specified in the 1994 exhibit repair/rehabilitation plan. The themes set forth in this Plan for Interpretation are the guide for the exhibit plan and all other interpretation within Natural Bridges. Most of the exhibitry will be panels with graphics and photos. A few taxidermy specimens, plant models, and archeological artifacts will be incorporated into them. A three-dimensional model of an archeological structure will provide realism and context, as well as an opportunity to incorporate significant resource protection messages into the exhibitry. The bridge formation story will be told using bold, colorful images and comparative data that highlights the unique nature of the three outstanding bridges located here. The existing relief model

of the park will be rehabilitated to include better orientation pictures, information, and labeling. Cloth banners hung from the ceiling in the lobby will orient visitors in a more logical traffic flow.

#### Audiovisual Programs/Equipment:

One 7- to 10-minute general orientation/interpretation video disk program will be produced, to be shown on a 35-inch monitor. The purpose of this program will be to spark visitors' interest in personally experiencing the park. It will deal with the geology of the park (with an emphasis on bridge formation) and archeology (park-specific, with an emphasis on site etiquette). The monitor will be placed high enough (at least 48 inches from the floor) to give an unobstructed view to the entire audience. This program will be captioned. An uninterruptible power supply will be provided to protect the equipment from power surges and drops.

At some point it may be desirable to produce two separate 7- to 10-minute programs—one on geology, and one on archeology—for use by visitors and groups having a special interest in these subjects. These could be used on site, and will also be sent or taken by park staff off site to use in school programs. Videos would be ideal for this purpose, but cost may be prohibitive; slide programs would be acceptable, lower-cost alternatives. The geology program could provide more detail than the general orientation video does, covering topics such as geomorphology and stratigraphy of the Colorado Plateau, and how these relate to the formation of the natural bridges. The archeology program could likewise treat its subject in greater depth than the orientation



video does; it will deal with the Anasazi developmental stages, archeology, and cultural resource protection activities such as ruins stabilization.

#### **WAYSIDE EXHIBITS:**

A lighted, three-panel, glass-encased bulletin board on the outside wall of the visitor center makes basic orientation, safety, and resource protection information, interpretive program schedules, and other appropriate information available to visitors at all hours. A similar two-panel wayside exhibit/bulletin board has been placed in the campground; it is not lighted.

Waysides will be located only in the developed corridor (see Internal Influences and Considerations section), and all will be accessible to visitors with mobility impairments.

#### **AMPHITHEATER:**

The trail to the amphitheater will be maintained to its present standard, in keeping with the rustic nature of the campground. It may be desirable (depending on the timeframe for campground abandonment) to consider improvements both to the present facility and to accessibility.

#### **PUBLICATIONS:**

A "Bridge View Tour Guide" will be published by the cooperating association in 1995 to augment the wayside exhibits with more in-depth information about the geology, bridges, history, archeology, and natural history of the park.

A hiking trail guide will be published to interpret the geologic features, environments, and archeological sites that visitors will encounter in the back-country. This publication will communicate a strong resource protection

ethic, as well as basic safety information.

Multilingual orientation and basic informational material are being provided, and will be expanded as necessary.

Increased multilingual sales items will be made available through the cooperating association.

An area newspaper may be developed to provide general orientation and information about the Southeast Utah Group parks. This would be published through the cooperating association.

#### **OTHER:**

Although the photovoltaic system is no longer a primary focus of interpretation, information about the use of alternative energy, such as solar power, is available in a pamphlet on site.

Also, for visitors with a special interest in the photovoltaic system, a short audio message is available at the solar panel array field overlook.

A package will be developed for use by bus tour leaders. It will contain basic orientation information and interpretive materials dealing with the bridges, archeology, and natural history.

#### **Personal Services**

Personal services are an integral part of the interpretation of Natural Bridges National Monument. Evening programs, patio talks, and roving interpretation along the loop road have been scheduled whenever seasonal interpreters, Student Conservation Association personnel, or Volunteers-In-Parks have been available to do the work. All have been well received when offered. Unfortunately, inadequate staffing levels at the park have

precluded making these personal-services activities a regular part of the interpretive program (with the exception of evening programs from May to September, which are part of a regularly offered program). Although this plan calls for a variety of media to address the park's themes, they cannot completely replace the individualized interpretive experience provided by one-to-one contact with a skilled interpreter. It is vital that staffing at Natural Bridges be increased to a level at which personal services can be a predictable part of the day-to-day interpretive operation. Until that time, providing day-to-day basic services will be the priority, while providing off-site community outreach will be something to work toward.

Existing staff available for providing interpretive services, resource management, and visitor protection are:

Chief, I, RM & VP, GS 11  
1.0 FTE

Assistant, GS 09, subject-to-furlough  
0.9 FTE

Park Ranger (seasonal), GS 05  
1.4 FTE

### **Staffing Needs**

The organizational structure in the Division of Interpretation, Resource Management, and Visitor Protection will remain, but additional staffing will be needed to make it possible to maintain interpretive programming at an adequate level. Addition of the following positions will make this possible:

*GS 04, Information Clerk, subject-to-furlough — 0.75 FTE.*

The primary function of this position will be to provide off-season staffing of the visitor center, community outreach,

and information management functions. Some additional administrative duties may be incorporated as needed.

*GS 05, Park Ranger (Seasonal)—  
1.5 FTE*

These three positions will allow for increased hours of visitor center operations (8 a.m. to 6 p.m., from March through October) to accommodate the changing visitation trends. They will make it possible to increase the frequency of formal programs and decrease the dependency on Student Conservation Association members and Volunteers-In-Parks for key interpretive services. The individuals in these positions will also assist in fee collection operations and with resource management.

### **Cooperative Activities**

The Canyonlands Natural History Association (CNHA) has long been a partner in providing interpretation at Natural Bridges National Monument. CNHA provides a variety of interpretive publications for sale. CNHA will be involved in any re-design of the use of space in the visitor center sales area, and will be instrumental in developing a new auto tour guide and hiking guide.

### **Interpretive Research And Studies Needs**

A new visitor-use study is desirable to provide an update on trends and assess the needs of the visiting public on the Colorado Plateau. An accurate, up-to-date visitor profile is needed to enable park staff to plan and provide interpretation that truly meet the needs and expectations of the visiting public.

Other research needed to enable park staff to provide more accurate inter-

pretation in both personal services and media include a general history of the park and surrounding area, and a document or handbook incorporating administrative, natural and cultural history, and research findings.

### ***Alternative Management and Funding Strategies***

Additional monetary and human resources will be required to bring the interpretive program at Natural Bridges National Monument to its optimum. Park management will prioritize and program the developments and services prescribed by this plan, keeping in mind that the federal process of acquiring funds can be painfully slow and uncertain. It is important to concurrently pursue alternatives to federal funding in order to accomplish the program at the earliest possible date.

Park management has already been successful in obtaining considerable outside support for improvements to interpretive media. In 1990 and 1991, the wayside exhibits were entirely redesigned and replaced through a combination of funding from The Nature Conservancy, Canyonlands Natural History Association, and the Rocky Mountain Region Interpretive Media Repair/Rehabilitation Program. In 1993 and 1994, an exhibit plan for the visitor center was prepared with Rocky Mountain Region Repair/Rehabilitation funding. This same funding source in 1995 has provided \$60,000, and the Canyonlands Natural History Association has made a commitment to donate \$40,000 toward the cost of exhibit construction. A donation box in the visitor center has yielded enough over the last several years to provide assistance to the resource management and Volunteer-In-Parks programs. In the future, donations could also be

used to help with media development. Implementation of this plan, as well as accomplishment of other media prescriptions, will require a continuation of this creative approach to funding.

### ***Conclusion***

*"The vicinity of Natural Bridges, where primitive Hopi Indians roamed, is new to the tourist, but will be one of the most popular play grounds in America."*

*Zeke Johnson, December 1933  
(Monthly Report)*

Zeke Johnson proved to be correct in his assessment of the attraction that Natural Bridges and its environs would have for the public. The Colorado Plateau—long a well kept secret—has in recent years been "discovered." Visitors from all over the world are coming in increasing numbers to experience the special mystique of this region—its mazes of colorful canyons, its haunting ruins and rock art, and its unparalleled opportunities for quiet contemplation and solitude. Natural Bridges is the only place on Cedar Mesa with established interpretive facilities. Formulating this Plan for Interpretation is the first step in ensuring that the interpretive story being told is appropriate, and the media being used to tell it will be of the best possible quality to enhance visitors' experience of this special place. Carrying out this plan will be a challenge requiring boldness, creativity, and tenacity on the part of park managers—but the rewards of success will be worth the effort.

### ***Summary of Media Proposals and Cost Estimates***

The following are Harpers Ferry Center gross 1992 cost estimates, identified



by project-type number. When costs are shown in parentheses, they were made by park/region for items to be done by other than Harpers Ferry Center.

### MUSEUM EXHIBITS

#### Provide new exhibits for visitor center

- (51) Museum Exhibit Design Plan  
\$26,000\*
- (52) Museum Exhibit Production  
\$144,000\*
- (61) and (62) Plan and produce 2-3  
minute silent video  
\$6,480
- Produce interpretive sign for solar ar-  
ray field overlook (Through HFC task  
order system; HFC net figure.)  
\$1,750

\*1994 figures

### AUDIOVISUAL PROGRAMS

- Plan and produce a 7-10 minute cap-  
tioned laser disc video orientation  
program.
- (61) Planning  
\$8,000
- (62) Production  
\$35,000
- Plan and produce a 7-10 minute  
geology video disc program  
\$ 43,000

*Alternative:* produce as sound/slide  
program

- Plan and produce a 7-10 minute  
archeology video disc program  
\$ 43,000

*Alternative:* produce as sound/slide  
program

### AUDIOVISUAL EQUIPMENT

- Laser disc player, Supervox control,  
speakers, 35" monitor for visitor  
center auditorium  
\$ 20,000
- Replace lapse-dissolve equipment at  
visitor center (through HFC replace-  
ment program).  
No cost to park

### FACILITIES MODIFICATIONS/ REHABILITATION

- Expand visitor center on north side to  
provide better designed sales area.  
Work to be done by contract.  
(\$11,640)
- Build exterior door in auditorium and  
provide locking door between audito-  
rium and visitor center lobby. Re-  
move projection room and replace  
with small projection booth. Re-  
carpet back of room. Estimate in-  
cludes materials and day labor.  
(\$ 5,000)
- Build new projection screen, control  
box, and projection booth and re-  
place conduit. HFC will provide  
plans. Estimate includes day labor  
and material. (\$ 6,000±)



## *PUBLICATIONS*

- Bridge View Auto Tour Guide  
(to be published by Canyonlands  
Natural History Association)  
(\$ 7,500)
- Hiking Guide  
(to be published by Canyonlands  
Natural History Association)  
(\$ 7,500)
- Bus tour package  
(\$ 5,000)

## *INTERPRETIVE NEEDS PRIORITY LIST*

### Priority 1:

- Visitor Center Exhibit Plan
- Exhibit Production
- Plan and produce a 7- to 10-minute  
orientation video
- Video equipment for visitor center  
auditorium

### Priority 2:

- Modifications to visitor center  
auditorium
- Bridge View Auto Tour Guide
- Visitor center lobby and sales  
space modifications

### Priority 3:

- Bus tour package
- Hiking guide
- Foreign language brochures
- Geology audiovisual program
- Archeology audiovisual program
- Visitor needs assessment survey

## *Preparers*

### *PLANNING TEAM*

Steve W. Chaney, Superintendent,  
Natural Bridges National Monument

Jim Dougan, Chief, Division of Inter-  
pretation, Resource Management and  
Visitor Protection, Natural Bridges  
National Monument

Larry Frederick, Former Chief of Inter-  
pretation, Canyonlands National Park

Thea Nordling, Former Interpretive  
Planner, Rocky Mountain Regional  
Office:

### *CONSULTANT*

Tom White, Interpretive Planner,  
Harpers Ferry Center

## APPENDIX D: WILDERNESS SUITABILITY STUDY

### Introduction

The purpose of wilderness designation, which may be accomplished only through congressional action, is to preserve and protect wilderness characteristics and values over the long term, while providing opportunities for solitude and unconfined recreation. With passage of the 1964 Wilderness Act (16 USC 1311, et seq.), Congress declared that it is national policy to secure for present and future generations the benefits of enduring wilderness resources.

Although Congress can act on the suitability findings in the General Management Plan for Natural Bridges National Monument and any other information it chooses, the usual procedure in government would be for the National Park Service to conduct a formal wilderness study, including an environmental impact statement and formal hearings before the Executive Branch makes an actual recommendation on wilderness.

### Wilderness Definition

The Wilderness Act describes and defines a wilderness area as follows:

“A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in the Act an area of undeveloped federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and

managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, or other features of scientific, education, scenic, or historical value.”

### Criteria For Wilderness

Chapter 6 of the National Park Service Management Policies, *Wilderness Preservation and Management*, states that wilderness includes:

- Lands and waters found to possess the characteristics and values of wilderness, as defined in Wilderness Act; and
- Lands that have been logged, farmed, grazed, or otherwise utilized in ways not involving extensive development or alteration of the landscape. (These lands will be considered for wilderness if at the time of study the effects of these activities are substantially unnoticeable or their wilderness character could be restored through appropriate management actions.)

The policies continue to say that lands will not be excluded from wilderness because of the following:

- Management practices require the use of tools, equipment, or structures if those practices are necessary for the health and safety of wilderness travelers or protection of the wilderness area; and

- There are historic features in an area that attract visitors primarily for the enjoyment of solitude and unconfined recreation. (An area will not qualify if it contains historic features that are considered primary visitor attractions.)

### ***Interim Management Of Suitable Lands***

All lands determined suitable for wilderness designation will be managed under the provisions of the Wilderness Act and National Park Service policies to maintain wilderness characteristics and values. Interim wilderness management will continue until designation by Congress.

### ***Brief Description Of The Study Area***

The Natural Bridges area remains relatively isolated even today. The nearest services of any kind are 43 miles to the east. Many of the roads that provide access to the area were not completed until the 1970s. This has greatly restricted human access, development, and exploitation of the park and the surrounding area.

A piñon-juniper forest covers the area, and conceals the deeply incised canyons that cut through the park. These canyons limit the access into major portions of the park. There are few routes into or out of the canyons; these principally include the three trails that lead to the natural bridges.

The only documented historic use in the park is grazing, and its effects are diminishing with passing time.

An old and abandoned entrance road into the park has been converted into a foot trail (the Zeke Johnson Trail). Visitors hike on NPS-designated routes across the mesa top and in the

canyons. There are 12.8 miles of established trails in the park.

The park is surrounded by lands administered by the Bureau of Land Management and the State of Utah. None of these directly adjacent lands have been recommended by BLM for designation as wilderness, nor were any of them designated as Wilderness Study Areas (WSAs) by BLM. However, nearly all BLM lands adjacent to park boundaries have been recommended for Wilderness designation by the Utah Wilderness Coalition, and have been proposed as such in a bill titled H.R. 1500. Although BLM does not consider such H.R. 1500 lands as WSAs, special policy directives ensuring appropriate consideration of any actions undertaken on such lands have been issued by BLM.

### ***Wilderness Suitability***

Using the wilderness criteria previously described, an evaluation of the park was conducted by the National Park Service. Approximately 5,340 acres—or about 72 percent—of the park was found to possess wilderness characteristics and values (see Wilderness Suitability map). However, this area is configured quite narrowly, and wilderness characteristics and values within it could be significantly compromised if conditions and/or uses of adjacent BLM lands were to significantly change. The suitable areas contain no permanent improvements, have only minor human impacts, and currently provide outstanding opportunities for solitude and unconfined recreation. They also contain important ecological, geological, archeological, educational, scientific, scenic, and historic resources. This area is inaccessible to vehicles. It remains undeveloped, and “untrammeled by man.”



Park lands that do not possess wilderness qualities and values and that have been determined unsuitable for wilderness designation include contiguous areas of approximately 2,095 acres—or 28 percent of the park. This includes the area inside the loop road, within which the sights and sounds of vehicle traffic are frequently seen and heard; those areas near developments, which contain noticeable human impacts, and are in the Development Zone described in the Proposal chapter, and those along the structurally improved trails to the three natural bridges and overlooks. The development area includes the headquarters area, residence area, campground, utilities, and maintenance storage area.

#### ***Potential Wilderness Additions***

There are no other potential wilderness lands within the park.

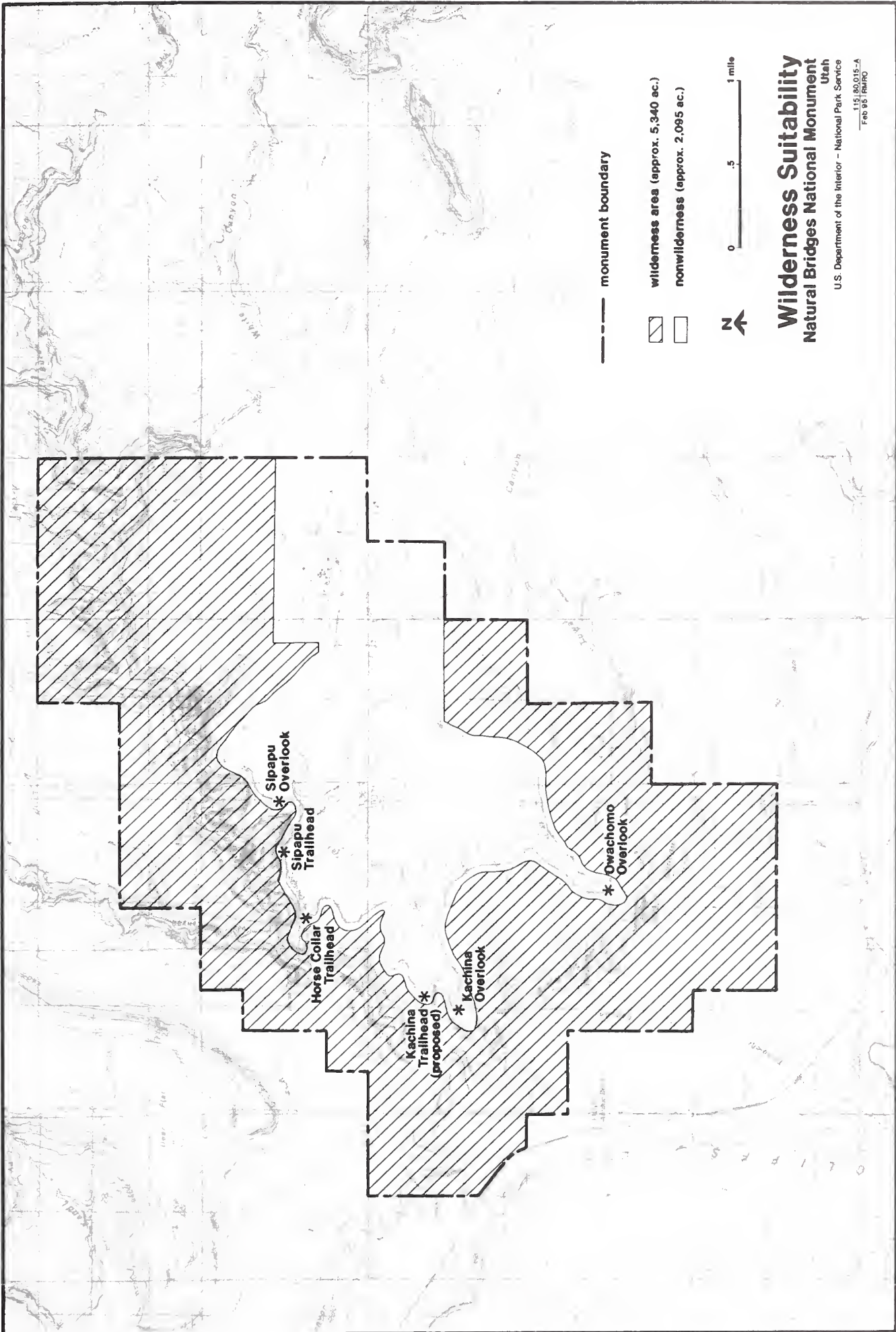
#### ***Implications for Managing Lands Identified as Suitable for Wilderness***

In effect, the areas identified as suitable for wilderness designation are currently managed as wilderness. This designation will require the NPS to continue this management in these areas, and restricts the National Park Service to stay within existing development, road, and trail corridors. The road and trail corridors will be permanently set in their current locations, and all future vehicular use and permanent trail structures will be kept within them.

#### ***Conclusion***

Approximately 5,340 acres—or 72 percent—of Natural Bridges National Monument has been found to possess wilderness characteristics and values and is currently being managed as such. Assuming that adjacent Bureau of Land Management lands are designated as wilderness, or that significant changes in use or management do not occur on adjacent BLM lands, these areas of the park are suitable for wilderness.





monument boundary

wilderness area (approx. 5,340 ac.)

nonwilderness (approx. 2,095 ac.)

0 .5 1 mile



# Wilderness Suitability

## Natural Bridges National Monument

Utah

U.S. Department of the Interior - National Park Service  
115 (80-015-A)  
Feb 95 R/RO

## **APPENDIX E: WILD AND SCENIC RIVER EVALUATION OF ELIGIBILITY, CLASSIFICATION, AND SUITABILITY, NATURAL BRIDGES NATIONAL MONUMENT**

*(Prepared by Gary Weiner)*

### **Introduction**

This report presents the results of the National Park Service's (NPS's) study of potential wild and scenic river segments in Natural Bridges National Monument. The purpose of this study is to determine whether any of these stream segments should be recommended for inclusion in the National Wild and Scenic Rivers System.

Four stream segments were evaluated. White Canyon Creek—a major topographic feature of western San Juan County—is the primary drainage within the park. Armstrong and Deer Canyons Creeks are tributaries of White Canyon Creek; and Tuwa Canyon Creek is a tributary of Armstrong Canyon Creek. Because the park is only about 12 square miles in extent, all of the stream segments are relatively short. Within the park, White Canyon Creek is 7 miles long; Armstrong Canyon Creek is 5.2 miles long; and Tuwa and Deer Canyon Creeks are each about 1 mile long.

White Canyon Creek, along with its tributary Armstrong Canyon Creek, was found eligible as a wild river. This intermittent stream meets the definition of free-flowing, and contains outstanding geologic and scenic resource values. The stream was also found suitable for inclusion in the national system.

### **Authorities**

NPS authorities and guidelines for the evaluation, designation, and protection

of wild and scenic rivers include: the Wild and Scenic Rivers Act of 1968 (as amended); the Presidential Directive to All Federal Agencies (August 2, 1979); the National Wild and Scenic Rivers System: Final Revised Guidelines for Eligibility, Classification and Management of River Areas; NPS Natural Resource Management and Planning Process Guidelines; and Special Directive 90-4.

### **Study Process**

All rivers in the park were evaluated. Each river study corridor, at a minimum, included the waterway and its adjacent lands to an average of ¼ mile from each river bank.

The wild and scenic river study process is composed of three steps:

1. Determine if stream segments are eligible as components of the National Wild and Scenic Rivers System;
2. Determine the appropriate level of classification of eligible stream segments; and
3. Determine whether or not the eligible segments would make suitable additions to the National Wild and Scenic Rivers System.

### **Eligibility**

To be eligible for inclusion in the National Wild and Scenic River System, a study segment must be free-flowing, and the stream and its adjacent corridor (in this instance, the canyons from rim to rim) must exhibit at least one "outstandingly remarkable" resource value.

"Free-flowing" means existing in a largely natural condition, without major impoundment, diversion, or other modification of the waterway. There are no specific requirements

concerning minimum flow for eligible segments. Flows are considered sufficient for eligibility if they sustain or complement the outstandingly remarkable values for which the segment would be designated. Rivers with intermittent flows have been designated into the national system.

Outstandingly remarkable values are scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values that stand out as among the best on a regional basis. (The region of comparison used for Natural Bridges National Monument<sup>1</sup> extends across the southern tier of Utah.) All values assessed should be directly river-related, or owe their location or existence to the river. Features that are exemplary (outstanding examples of common types), as well as those that are rare or unique, should be considered.

### ***Classification***

Four factors are evaluated in classifying eligible rivers: water resources development, shoreline development, accessibility, and water quality. The Wild and Scenic Rivers Act specifies three categories of classification:

1. River areas are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.
2. Scenic river areas are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

3. Recreational river areas are readily accessible by road or railroad, may have some development along their shorelines, and may have undergone some impoundment or diversion in the past.

### ***Suitability***

The suitability phase of the study evaluates whether designation as a national wild and scenic river would be the best way to manage eligible rivers.

### ***Interim Management***

NPS management of eligible stream segments in the park is sufficient to protect their eligibility from any threats that might conceivably originate within the park.

### ***Corridor Resources***

#### ***CANYON SETTING***

Natural Bridges National Monument was formed when the Cedar Mesa Plateau was cut by stream erosion to form White Canyon and its three major tributaries—Armstrong, Tuwa, and Deer. The canyons are all deeply incised, exhibiting soaring expanses of Cedar Mesa sandstone broken up by vegetated ledges. Access into these canyons is limited to only about a half dozen locations, due to the often-vertical slickrock walls. Dimensions on average are 200 to 400 feet deep, ¼ mile wide at the rim, and quite narrow in the bottoms. The deep, narrow canyons provide a cool microclimate for plants and wildlife. Three natural bridges are found in White and Armstrong Canyons, and three recreational trails accessing these bridges sustain high recreational day use.

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<sup>1</sup> As per Interagency Agreement between the National Park Service, U.S. Forest Service, and Bureau of Land Management, dated 12/13/94, and subsequent policy paper.



## WATER RESOURCES

All streams within the park are intermittent, flowing during spring runoff and local rainstorms. At times, flash-flooding in the canyons can be severe; flooding is common in late summer. Seeps and springs contribute to the water resources of the canyons, and all four canyons have year-round pools or wet areas.

Water quality of flowing streams is naturally turbid. Little is known about the surface and subsurface hydrology in and adjacent to the park. The effects on park waters of land management practices outside the park is not clearly understood.

## GEOLOGY

The canyons of the park, similar to other canyons in the surrounding region, have been deeply incised by stream erosion into a relatively flat mesa, resulting in the exposed geology of the near-vertical canyon walls.

The major distinctive geologic feature of the park is the existence in close proximity of three large natural stone bridges, including the second-largest (Sipapu Bridge) and fifth-largest (Kachina Bridge) in the United States.<sup>2</sup> Nowhere else in the world is there a greater concentration of natural stone bridges.

The bridges were formed by stream erosion, and are geologically distinct from arches, which are formed by the action of groundwater, frost, and wind erosion. Although natural bridges always begin by the erosive action of running water, they are frequently enlarged and shaped by the same

processes that form and enlarge arches.

Sipapu Bridge, located in White Canyon, suffers little or no additional stream erosion at the present time because its abutments now lie far from the streambed. Kachina Bridge, located near the mouth of Armstrong Canyon, is still eroding by floodwaters from White Canyon. Owachomo Bridge was apparently cut by stream action at the confluence of Armstrong and Tuwa Canyons, but no longer spans a streambed, and erodes instead due to frost, rain, and sand blast.

The three bridges within the park represent three stages of erosion. Two additional sites in the park show evidence of collapsed bridges.

The natural bridges were the reason the area was set aside as a national monument in 1908. Today, the canyons and their natural bridges are the primary attraction for visitors to the park. The forces of nature continue to work on the canyons and bridges on a geologic time scale, offering an excellent interpretive opportunity for the public.

## Scenery

Views into White, Armstrong, and Tuwa Canyons can be obtained from turnouts along the Bridge View Drive rim road. Set against a backdrop of the Henry Mountains, Bear's Ears, Moss Back Butte, Tables of the Sun, and other distant features, visitors look into the sharply incised canyons to see vertical cliffs, vegetated ledges, lush riparian vegetation, and views of the three dramatic natural bridges. Some cultural modifications can be seen from canyon lookouts on Bridge View Drive.

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<sup>2</sup> Rainbow Bridge in south central Utah is the country's largest natural bridge.



Views from within the four canyons are on a much more intimate scale, providing relief from the expansive views typical of the mesa areas. Close-up views of the massive stone bridges in White and Armstrong Canyons can be obtained, as well as views of numerous archeological ruins and rock art.

A notable feature of the park's canyon scenery is the virtual absence of the exotic tamarisk<sup>3</sup>, which is so prevalent in other canyons within the region. This invasive species tends to displace most other native riparian vegetation, creating a monoculture with a monotonous appearance, and screening out views of the surrounding canyon walls.

### RECREATION

Recreation visitation to Natural Bridges National Monument has increased by about 133 percent between 1984 and 1994 (138,000 visitors in 1994). Many people visit the park while on their way to other destinations or as part of a circle loop tour of the Southwest/Four Corners area.

The park is primarily a day-use facility, due to its small size, minimal overnight facilities (the only overnight accommodation available at the park is a 13-unit primitive campground), and a prohibition on overnight use of the backcountry.

Visitor use is concentrated on Bridge View Drive and the visitor center, with the primary recreational activity in the park being sightseeing from the overlooks. About 97 percent of visitors drive the one-way loop road to view

the natural bridges and other scenery. Most of these visitors stay in their cars. Only about 18 percent hike the trails down into White and Armstrong Canyons to get a closer look at the three bridges, but on peak days this can total 150 people or more. Fewer visitors will hike along the creeks between the bridges for the canyon experience and to view the archeological sites. Some swim in the larger perennial canyon pools. On average, canyon hikers stay in the park from 3 to 6 hours.

Natural Bridges National Monument is not a primary destination facility; rather, it is more typically a stop on a tour that includes several destinations. Most visitors are probably residents of the desert Southwest and Rocky Mountain area, with a substantial contingent of German visitors.

### FISH, WILDLIFE, AND VEGETATION

Vegetation in the four canyons consists of riparian, hanging garden, and relict Douglas-fir communities, with rimrock vegetation occurring on the canyons' upper slickrock faces. The hanging garden and Douglas-fir communities contain species and associations not found elsewhere in the desert; they occur within the region only in a number of sheltered canyon areas. Also, Natural Bridges is located in a macro-scale ecotone—an area where species of different ecotypes overlap. Although the park's species diversity is not exceptionally large, it is an area where species co-exist that are not usually found together.

The riparian areas consist of Fremont cottonwood with a shrub understory of sandbar willow, yellow and box elder, and a grass/forb community of phragmites, horsetail, and hairy goldenaster—all native species. This

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<sup>3</sup> *Being high in the watershed, water-borne tamarisk seeds are not as significant a problem as elsewhere. Monument staff are able to eradicate nearly all tamarisk seedlings on an annual basis.*

lush vegetation provides important wildlife habitat for populations of mule deer (fawning and wintering range) and other mammals, reptiles, amphibians, and migratory birds. The perennial pools, seeps, and springs are home to invertebrates not found outside of stream corridors.

According to the U.S. Fish and Wildlife Service, bald eagles, black-footed ferrets, and Mexican spotted owls (federally listed threatened and endangered species) might occur in the vicinity of the park, and there is at least one peregrine falcon aerie in the park. However, none of these species is dependent on the park's canyons (or the park itself) for habitat. The kachina daisy—a candidate species—occurs in the park; in fact, it was first located and classified in the park. Other candidate species that might occur in the area are the ferruginous hawk and white-face ibis.

Although all park rivers are intermittent, perennial standing water in the four canyons permits the existence of year-round populations of aquatic invertebrates.

## ARCHEOLOGY

The Grand Gulch Plateau, of which Natural Bridges National Monument is a small part, is rich in archeological and historical resources. The park was set aside in 1909 in part to preserve and protect these resources, particularly the Anasazi (prehistoric Puebloan) structural sites and rock art located within White Canyon and its tributaries.

Because the park has not been intensively inventoried for cultural

resources, none of the prehistoric sites within the park have been nominated to the National Register of Historic Places. However, it is quite likely that with intensive inventory by professional archeologists, the entire park will be listed on the National Register as a nationally significant archeological district, along with Cedar Mesa and the rest of the Grand Gulch Plateau.

However, most park archeological sites (primarily lithic scatters) are located on the mesa tops. The narrow canyons of White, Armstrong, Deer, and Tuwa Canyons, with their paucity of suitable year-round habitation sites, contain relatively few cultural resources. The Anasazi masonry granaries and rock art located in the canyons—some of which are very well preserved—do provide popular visitor attractions.

There is currently one structure located in the park's canyons listed on the National Register of Historic Places: part of a trail that led from the original ranger station to Owachomo Bridge.

## Eligibility

White Canyon Creek, along with its tributary Armstrong Canyon Creek, was found eligible for inclusion in the National Wild and Scenic River System.<sup>4</sup> Tuwa and Deer Canyon Creeks were found not eligible due to the absence of outstandingly remarkable resource values.

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<sup>4</sup> In 1982, the NPS listed White Canyon Creek from Lake Powell to its source on the Nationwide Rivers Inventory as a potentially eligible stream with outstanding geologic, scenic, historic, and cultural values. The NRI lists White Canyon Creek as "a superlative example of an intermittent stream."

### *FREE-FLOW*

Although stream flow in White, Armstrong, Deer, and Tuwa Canyons is intermittent, occurring as a result of spring runoff and local rain events, the creeks are nonetheless free-flowing as defined by the Act, Interagency Guidelines, and administering agency policy. The Wild and Scenic River system clearly was designed to exemplify the broad diversity of rivers in America, including outstanding examples of those common to the desert Southwest.

### *OUTSTANDINGLY REMARKABLE VALUES*

White and Armstrong Canyon Creeks exhibit outstanding geologic and scenic resource values, primarily owing to the existence of three natural bridges in these two canyons. Nowhere else in the world can there be found a greater concentration of large, natural stone bridges, including the second- and fifth-largest in the United States.

The value of these stream-cut rock formations is both scientific—as outstanding examples of a rare geologic phenomenon—and scenic—as dramatic focal points of vibrant canyon scenery. The natural bridges were the reason the area was set aside as a national monument in 1908, and today continue to be the primary attraction for visitors to the park.

### *Classification*

The 7-mile segment of White Canyon Creek and the 5.2-mile tributary segment of Armstrong Canyon Creek meet the wild river classification standards. They are free of impoundment; inaccessible except by trail; contain no structures except those of archeological value; and meet water-quality standards, except where exceeded by natural conditions.

### *Suitability*

White Canyon Creek, along with its tributary—Armstrong Canyon Creek—was found suitable for inclusion in the National Wild and Scenic Rivers System.

The considerations relevant to a suitability evaluation, as addressed in the Act, Interagency Guidelines, and agency policy, are discussed below.

### *CHARACTERISTICS THAT DO OR DO NOT MAKE THE AREA A WORTHY ADDITION*

White and Armstrong Canyon Creeks contain the greatest concentration of large natural bridges in the world, and would make a valuable addition to the National Wild and Scenic Rivers System.

As of yet, this region of the country, with its dramatic desert and canyon rivers, is very poorly represented in the national system.

### *LAND-OWNERSHIP*

All land within park boundaries is federally owned.

### *CURRENT USES*

The purposes for which the park was established and expanded are protection of the natural bridges and archeological sites. Use of the park's canyons is primarily visual use by automobile sightseers driving the rim road, and secondarily by day-hikers viewing the bridges and archeological resources.

### *USES AND RESOURCES ENHANCED, CURTAILED, AND FORECLOSED*

Wild and scenic designation would have little if any effect on uses within Natural Bridges National Monument. The park is already administered for



protection of the outstandingly remarkable resources. No uses would be foreclosed or curtailed that are not already. Natural Bridges would realize an additional tool for protection of stream resources from adverse affects of upstream uses, although little need for this tool is currently foreseen.

#### *EXISTING RESOURCE PROTECTION*

The park is currently administered for resource protection, balanced with appropriate public use, according to National Park Service mandates. Park proclamation language specifically directs protection of the key outstandingly remarkable resource—the natural bridges.

#### *COSTS REQUIRED FOR LAND/EASEMENT ACQUISITION AND CORRIDOR MANAGEMENT*

Because all corridor lands are federally owned, no costs for land acquisition would be incurred. No additional costs for corridor management owing to wild and scenic designation would be incurred.

#### *EXTENT TO WHICH ADMINISTRATION COSTS WILL BE SHARED BY LOCAL AND STATE GOVERNMENTS*

Because the land is all federally owned, and currently administered for resource protection, and additional costs due to designation are not

anticipated, state and/or local governments will not be expected to share administration costs specifically because of designation.

#### *FEASIBILITY AND TIMELINESS OF DESIGNATION*

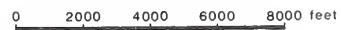
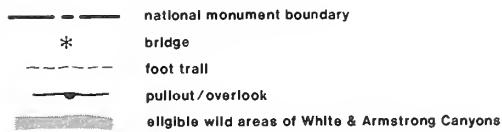
The Bureau of Land Management, and, to a lesser extent, the U.S. Forest Service and National Park Service, are actively conducting wild and scenic river studies on many areas under their jurisdictions within the State of Utah. In addition, the three agencies are currently pursuing congressional funding to conduct a joint state-wide wild and scenic river study in Utah. The opportunity may soon present itself to package a set of rivers throughout the state for congressional or Secretarial action.

Although a formal determination has yet to be made, the Bureau of Land Management has a draft finding of eligibility for White Canyon Creek between the boundaries of the Manti-La Sal National Forest and Glen Canyon National Recreation Area (excluding Natural Bridges National Monument).

#### *MANAGEABILITY TO PROTECT ORVS*

Given that the existing federal ownership and administration focus upon resource protection, protection of ORVs will continue regardless of designation.





United States Department of the Interior - National Park Service

## APPENDIX F: FACILITY DESIGN GUIDELINE

### *Introduction*

The developed area within Natural Bridges National Monument is small compared to the natural areas. Park structures are relatively new. The earliest buildings were built in the mid-1960s. The design of the existing buildings is compatible with the surrounding environment in terms of massing and scale, form, materials, and color, and they are the subordinate elements in the dramatic natural setting. The objective of this guideline is to provide direction in design and materials used for construction and maintenance of facilities in the park. The guideline applies to roads, buildings/site furniture, site elements, and landscaping.

### *Architectural Elements*

#### *MASSING AND SCALE*

The developed zone in the park is on the mesa top, and therefore can be highly visible to visitors in this zone, as well as to visitors down in the canyons looking up to the mesa. Therefore, it is important that the massing and scale of facilities be subordinate to the landscape surrounding them. They must be low-profile, in small groupings, and well-screened.

#### *FORM*

Form is the shape a structure takes through placement of features such as windows, roof lines, porches, walls, and so forth. The form of structures in Natural Bridges National Monument should be based on simple forms, and borrow on shapes found naturally in the surrounding landscape.

### *MATERIALS*

Building materials used in the park include masonry block, stucco, wood, concrete, stone, metal (on small features, such as railings), and asphalt shingles. The combination of materials used in existing buildings blends well with the natural environment. New construction should be compatible with this existing development. Materials should be matte, and non-reflective.

### *COLOR*

Colors on existing park structures include brown, beige, and light pink. Overall, these colors are compatible with the colors found naturally in the surrounding environment. When choosing colors, it is important to be aware of the final location of structures. Will the element be surrounded by other structures, or vegetation? Is it on a mesa top with no backdrop, or down in a low area? Are people viewing it from above, or below? Structures on top of ridges or mesas with no backdrops should generally be lighter in color so they do not stand out in the landscape. Structures with backdrops, such as hillsides or vegetation can generally be darker in color because they can be “absorbed” by the surrounding vegetation. However, it is important to judge each element individually. Colors should also be matte and non-reflective, and borrow from the colors found in nature.

### *Roads And Parking Areas*

The main park road will continue to be a one-lane, paved surface, designed for low-speed travel. Parking areas will also be paved. Parking areas shall provide for various types of vehicles, and shall have a permanent concrete handicap ramp from the parking area

to the sidewalk. These ramps should have no more than an 8-percent slope (1:12), and be a minimum of 4 feet wide.

Pullouts/overlooks along the road shall be identified with signs similar in design to the “Sipapu Bridge Point 100 Yards” sign. All curbs in the park shall be of the same material and color.

### ***Buildings and Site Furniture***

New buildings or additions to existing buildings shall conform to the architectural style existing in the park. Building materials shall be compatible in terms of type, color, and quality. Roof lines and the scale of buildings or structures shall be compatible with existing park buildings.

Comfort stations or vault toilet buildings shall be identical to the ones in the campground.

Benches shall be sandstone or wood, or a combination of the two, and be permanently mounted to the ground. Bike racks shall all be the same design, and be painted a dark brown or buff color to blend with the surrounding natural environment. Trash containers shall all be of the same design, and set at ground level. Finishes should be similar to the materials used on buildings in the park. This includes wood, pre-cast concrete, or painted metal. All should have attached lids or lids that can be secured to the container.

Picnic table shade structures shall be the same style and design throughout the park. The architecture and construction materials shall be compatible with other buildings in the park. Construction materials include wood, stone, concrete, colored concrete block masonry, and pre-cast concrete with a stucco finish. Roofs should be

sloped, and may be solid or transparent. Not all tables need to be covered. Ground surfaces around tables accessible to visitors with disabilities shall be concrete. Others may be gravel or concrete.

### ***Site Elements***

Walks shall be concrete, to blend with the surrounding landscape and to match the existing sidewalks. A width of 7 feet (to match existing) is recommended, and all walks should be the same width. All walks in the park shall be the same color.

Fences/walls may be constructed of stone (sandstone), or wood, or a combination stone and wood, to blend with the surrounding natural environment.

Railings shall be designed to blend with the environment and made of wood or painted metal.

Site steps shall be colored concrete or sandstone, or a combination of the two.

Signs shall be compatible with their intended use. Traffic control signs shall conform to the current uniform traffic sign code. Pullout and overlook signs shall all be identical to the existing “Sipapu Bridge Point 100 Yards” sign. Interpretive signs shall be similar to existing ones. All shall be compatible in scale and design with the surrounding natural environment.

### ***Landscaping***

Attention should be given to maintaining continuity in the landscape and repeating adjacent vegetation patterns. Use of native vegetation and transplanting material in the park should be done when feasible, using a combination of trees, shrubs, and ground covers. Park operational areas should be screened from the visitor use areas.

Vista-clearing may be selectively performed to enhance visitor enjoyment and awareness of the natural landscape. Key views from roads, trails, and visitor facilities should be established. Vegetation removed for these vistas should be transplanted to another area in the park. When clearing for vistas, the edges of the cleared area should be “feathered” to prevent a “clear-cut” look.

### ***Outdoor Lighting***

Outdoor lighting will be designed to minimize impacts to the night sky. The number and size of outside lights will be kept to a minimum, and lights will

be shielded so that they shine downward but not upward. Motion sensors and photo sensors will be used, which cause lights to shut off when no one is nearby.

### ***Sustainable Design: Energy and Water***

Buildings and developments will follow the NPS Sustainable Design Principles which require all facilities to be designed to minimize energy and water use. The principles of sustainable design apply, without reservation, to all types of climates. In a park or ecotourism development, where health considerations are paramount, water issues center on providing safe drinking, washing, cooking, and toilet-flushing water.



## APPENDIX G: RATIONALE FOR REJECTION OF MAJOR BOUNDARY CHANGE

### *Planning Situation*

Section 604 of Public Law 95-625 requires that General Management Plans “for the preservation and use of each unit of the national park system ... shall include indications of potential modifications to the external boundaries of the unit, and the reasons therefor.”

A 1988 publication of the National Parks and Conservation Association (NPCA) proposes an increase in the size of the park from 7,400 acres to about 37,000 acres, to incorporate natural (geologic) and archeological values within the headwaters of White, Armstrong, and Tuwa canyons. This proposal would affect lands administered by the Bureau of Land Management (BLM), the U.S. Forest Service (USFS), and the State of Utah. The NPCA report goes on to identify the specifically proclaimed purposes of the park as protection of extraordinary natural sandstone bridges and prehistoric Indian ruins. Considered in the following discussion of the adequacy of the park boundary are the processes that form natural bridges, and the status of prehistoric resources in and outside of the park.

Scenic qualities of units of the National Park System are part of their primary purpose, and this is made clear in the National Park Service Organic Act of 1916, and in later legislation further defining the purpose of the national parks. Natural Bridges is a relatively small park, and the many people who enjoy the broad vistas from within do not realize that they are viewing Bureau of Land Management and na-

tional forest lands as well. Therefore, the scenery of the park, which is augmented by more distant views of a vast piñon-juniper forest—and canyons, slickrock, and mesas beyond the boundary—are also considered.

### *GEOLOGIC PROCESSES*

The three natural bridges in the park in their different stages of geomorphic evolution are the only such known features within the headwaters of White, Deer, Armstrong, and Tuwa canyons. The bridges were created by streams eroding through tight meander bends in the canyons—a “short-cutting” that depends on the structure of the canyon walls and the force of the stream at the particular places where the bridges are formed. It is true that the streams above the park collect a sizable volume of water and contribute to the formation of the bridges, but it is the local geomorphic condition that accounts for the bridges within the park. The absence of other known bridges or remnants thereof outside the park leads the National Park Service to conclude that the boundary need not be altered on account of bridge-related geologic processes.

### *ARCHEOLOGICAL RESOURCES*

In conjunction with general management planning, prehistoric sites in the park—as well as those outside for several miles—were evaluated. Archeological surveys inside the park have been limited principally to the canyons and to past construction areas, and are far from complete. Surveys by the Bureau of Land Management and U.S. Forest Service outside the park are even more incomplete, and record scattered sites believed by archeologists to be a tiny fraction of

the total number in the larger Natural Bridges area. The total number of mesa top sites within and outside of the park is likely to be in the thousands, and this density of sites may extend miles southward into the archeologically rich Cedar Mesa area. The immense cost of completing surveys in the Natural Bridges area is far beyond the capacity of the present study, yet this situation does not absolve the NPS, BLM, and USFS from ultimately completing comprehensive surveys and determining the significance of all these resources (refer to Executive Order 11593). Lacking the survey information, there is no objective way to change the park's boundaries based on prehistoric resources. To do so now would raise the question of where to stop the expansion, and also recognizes the presently insoluble issue of the monetary ability of federal agencies to fully inventory and manage their cultural resources.

## *SCENIC RESOURCES*

### Introduction:

This topic is complicated, and requires lengthy discussion in the sub-sections that follow. The effects of future land management practices, including removal of woodland cover outside the park, are considered. This assessment leads the National Park Service to conclude that no boundary adjustments are now necessary based on the criterion of scenic protection.

### Geographic Setting:

Natural Bridges National Monument is in the southern part of a 60-square-mile "viewshed basin." The basin is bounded on the southwest, west, northwest, north, northeast, and east by steep-sided, 1,000-foot-high mesas. There are no mesas to the south and

southeast, but the general slope of the land encloses the view here as well, as far as views from the park are concerned. The general floor of the basin, eroded onto the resistant top of the Cedar Mesa sandstone, is incised by the canyons of White, Armstrong, and Tuwa creeks, which drain westward and contain the three natural bridges in their lower levels. Most of the land surrounding the park is administered by the BLM. Higher lands to the east and northeast, at a distance of 3 to 5 miles from the park, are administered by the USFS and are within the Manti-LaSal National Forest. These surrounding lands, as seen from the park and its 4-mile-long approach road (U-275), appear little-disturbed by human activity, except for uranium mine tailings and other evidence of mine prospecting in the 1950s and 1960s along the slopes of Deer Flat Mesa northwest of the park. The dominant plant community on the floor and sides of the basin is piñon-juniper woodland. On actual examination from within the park, this vegetative cover is far from being a continuous blanket of forest; it is broken in many places by ledges of white sandstone that form the heads of numerous side drainages of the main canyons. The forest, interspersed with these bedrock ledges, provides opportunity in the design of vegetative disturbance areas to simulate the lines and masses in the natural terrain.

### NPS Viewshed Analysis:

As part of the planning, a computerized viewshed analysis was prepared. The area selected contains the park and its geographic "basin," including all lands proposed for addition by NPCA. This task started with identification of 33 selected points along the 4-mile entrance road (U-275) and



along the park's road system, including the one-way bridge view loop drive. The major vehicular viewpoints and trailheads were included. The viewshed analysis is based on the perspective of a human standing upon the road surface, and the results were verified in the field. Areas shown to be visible from any particular point are commonly not really visible because most of the roads are bordered by trees that obscure or completely eliminate the distant scene. Exceptions are either the few places where the road is above the general regional land surface or the places close to exposed canyon rims where the forest is discontinuous. Popular trails leading down into the canyons to the three bridges are out of sight of the portions of the regional land surface potentially affected by vegetative treatments outside the park. The lesser-used mesa top connector trails are on high ground, and some of their views are likely to be impacted by land management projects outside the park. The graphics in this appendix include a Frequency-Viewshed Analysis map, which shows the relative visibility of areas from the park's approach road and internal road system.

## ***BLM MANAGEMENT***

### **Introduction:**

The following sections assess the exterior areas visible from the park, and interrelate the NPS viewshed analysis with the plans and practices of the BLM. The key plan for the BLM is the Resource Management Plan and Final Environmental Statement of the San Juan Resource Area, approved in 1991.

### **Specific Management Plans of BLM Near Natural Bridges:**

The BLM's visual management (VRM) classes are based on visual resource conditions such as scenic quality, distance zones, and sensitivity levels. These are reviewed periodically, and a change in conditions could result in a change in VRM class for specific areas. The San Juan Resource Management Plan states that a change in VRM class may occur only through a plan amendment. Approval of the BLM's resource management plan (March 1991) resulted in three of several types of management zones (VRM) prescribed for lands surrounding the park. These zones allow different levels of scenic protection and intensities of land treatment practice.

The BLM Visual Resource Management Zones map (drawing number 115/80,020) shows these three visual management zones (VRM-I, VRM-II, VRM-IV) in the vicinity of the park. These areas can be seen to varying extent and at different distances from the roadways and viewpoints of both Utah 275 and the public roads within the park, including Bridge View Drive. If treatment were ever proposed and implemented in the areas described, the quality of visitor experience could be affected, and there could be other impacts on park resources as well. Only the visual effects are assessed here.

### ***1. Area of Critical Environmental Concern (Acec):***

This ACEC is, in most places, a 1-mile-wide strip centering on Utah 95. It is contiguous with the southern and southwestern part of the park boundary for about 6 miles, and has no areas of potential vegetative treatment that

could be realized under the practices defined for this particular ACEC. It is excluded from commercial removal of woodland products; construction of range improvements and land treatments; use of off-road vehicles; and leasing of minerals and mineral entry. Further, it is afforded a high order of scenic protection through its visual resource management classification—VRM-I.

The objective of VRM-I is “to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.”

VRM-I is also applied to the steep slopes of Moss Back Butte; the southwest boundary of Natural Bridges National Monument; and the mouths of K&L Canyon, Hideout Canyon, and Cheesebox Canyon. The escarpment of Deer Flat Mesa, which is highly visible from most points in the park and along its approach road, and forms the southwestern, western, and northwestern sides of the Natural Bridges “viewshed basin,” is classified as VRM Class II.

## 2. *Visual Class II Areas:*

VRM-II is contiguous with the northwestern part of the park boundary for 2 miles. This class also is contiguous with the southeastern and eastern part of the park boundary for 6 miles.

The objective of VRM-II is “to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the

casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.”

## 3. *Visual Class III Areas:*

No such classification has been applied in the Natural Bridges area, but for continuity, the VRM-III standard is stated here.

The objective of VRM-III is “to partially retain the existing character of the landscape. The level of change to the characteristic landscape would be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.”

## 4. *Visual Class IV Areas:*

VRM-IV is contiguous with the northern part of the park boundary for 4 miles.

The objective of VRM-IV is “to provide for management activities which require major modifications of existing character of the landscape. The level of change to the characteristic landscape can be high. Management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.”

BLM Practices and Plans For Land Treatment: Potential methods used for treatment (i.e., remove piñon-juniper trees to promote growth of introduced grasses and improve forage for livestock and wildlife) include mechanical (chaining and roller chopping), chemi-



cal (including herbicides), and fire (managed burns). Only chemicals or fire would be used in areas that exceed 10-percent slope and even on slopes of less than 10 percent, chaining is rarely used on BLM lands these days. Chainings and roller chopping are high-cost projects and may not be economically feasible in a given area. BLM is in the process of doing a vegetative management plan looking at opening up areas of piñon-juniper in favor of grasslands. Chaining is probably not a concern, but herbicide and prescribed fire are a possibility.

In addition, current BLM policy requires a cultural resource inventory prior to any surface disturbances for vegetative manipulation. Potential BLM mitigations to protect archeological resources include use of herbicides or fire, and leaving buffers (islands) around prehistoric sites if mechanical means should be used. In planning for the Cedar Mesa area south of the park, the BLM estimated up to only one-half of the potential acreage could be treated if mitigation for cultural resources was applied. Because archeological sites in the Natural Bridges region are believed dense, it is likely that the actual acreage treated within sight of the park would be significantly less.

If a vegetation treatment were to be proposed for BLM lands within the Natural Bridges viewshed, the method of treatment would be determined at that time. NEPA documentation would assess site-specific impacts to visual and other resources as well. The planning for vegetative treatment would include public involvement, and be conducted in accordance with CEQ regulations for implementing NEPA.

Except in cases where grazing permittees are willing to fund 100 percent of a project's cost, the BLM would complete a cost/benefit analysis on each site-specific project before deciding whether to fund the project. The potential for added cost due to the mitigation of impact on cultural resources would be accounted for in these analyses.

The NPS would be asked by the BLM to do more than merely comment on any proposed treatment actions in the vicinity of Natural Bridges National Monument. Because Executive Order 11514 calls on federal agencies to develop programs and measures to protect and enhance environmental quality, exchange data and research results, and cooperate with other agencies to accomplish the goals of NEPA, the NPS would be expected to provide input at the planning and design stages of treatment and recommend mitigations to reduce the adverse effects on visual quality and other resources of the park. BLM planning criteria stated in section 202© of FLPMA include, in the development and review of plans, to coordinate to the extent possible with the land use inventory, planning, and management of public lands and management programs of other federal agencies. FLPMA also states that the effects of each alternative in the NEPA process include the impact of management actions upon adjacent federal lands and upon the formal land use plans of other federal agencies.

At the present time, the San Juan Resource Area has initiated no planning for site-specific treatments in the vicinity of the park. It is unlikely that the BLM will decide to conduct such projects in the future (oral communication,

Ken Rhea, Associate District Manager of the Moab District of BLM, and a member of the general management planning team for Natural Bridges).

### *U.S. FOREST SERVICE PLANS AND PROGRAMS*

#### Introduction:

The key plan of the USFS is the Land and Resource Management Plan (Forest Plan) for the Manti-LaSal National Forest. In recent years, cooperative planning between the USFS and BLM included joint identification of areas physically suitable for land treatment, and nearly all of these areas within the national forest are not in sight of the park. A few potential treatment areas in the forest are tributary to White Canyon, which passes through the park. The national forest is more distant from the park than the BLM lands (3 or more miles from the park); therefore, the NPS would expect lower levels of impact from USFS projects than BLM projects.

#### Hardrock Mining/Oil and Gas Exploration and Development:

Because the Chinle formation on the outer portions of the Natural Bridges viewshed is the zone of past uranium mining activity on both USFS and BLM land, the NPS is concerned about visual effects of mine excavations and the roads that provide access to mines, particularly on slopes in view of the park. Despite dismal forecasts for revival of the uranium industry, there are withdrawn areas near Woodenshoe Butte, where the Department of Energy controls the federal mineral rights—including uranium, but the USFS controls the surface resources and can prescribe and enforce stipulations attendant to leases to help control the visual impacts of mining and access.

Probably, within the Natural Bridges viewshed, there are numerous mining claims, too—and the number that are still valid is not known.

#### State of Utah Permits/Leases:

In the Natural Bridges viewshed, the state owns five sections of land containing about 3,200 acres. These five scattered sections are usually under permit for grazing, and may be leased for other purposes that could affect park visitors and resources. For example, it is possible that an oil well drilled in 1984, in state section 32 immediately east of the park boundary, might have introduced salt into the aquifer that supplies the park's water. The outcome of potential geophysical exploration and oil/gas leases on BLM and USFS lands is of similar concern to the NPS, even though prospects of economic development of hydrocarbon and other mineral discoveries are not high. Some effects of state land-ownership could be beneficial to the NPS and other agencies. As described elsewhere in this plan, some such sections may have potential for the additional needed structured camping that has been found infeasible for expansion inside the park.

### *Conclusions*

The geologic processes as related to the formation of the bridges provide little basis for enlarging Natural Bridges National Monument. The near lack of archeological surveys and related determinations of significance outside the park would make any present proposal for boundary expansion arbitrary. The potential for vegetative treatment, hardrock mining, and oil and gas exploration and development on adjacent lands does cause the NPS to be concerned about visual and

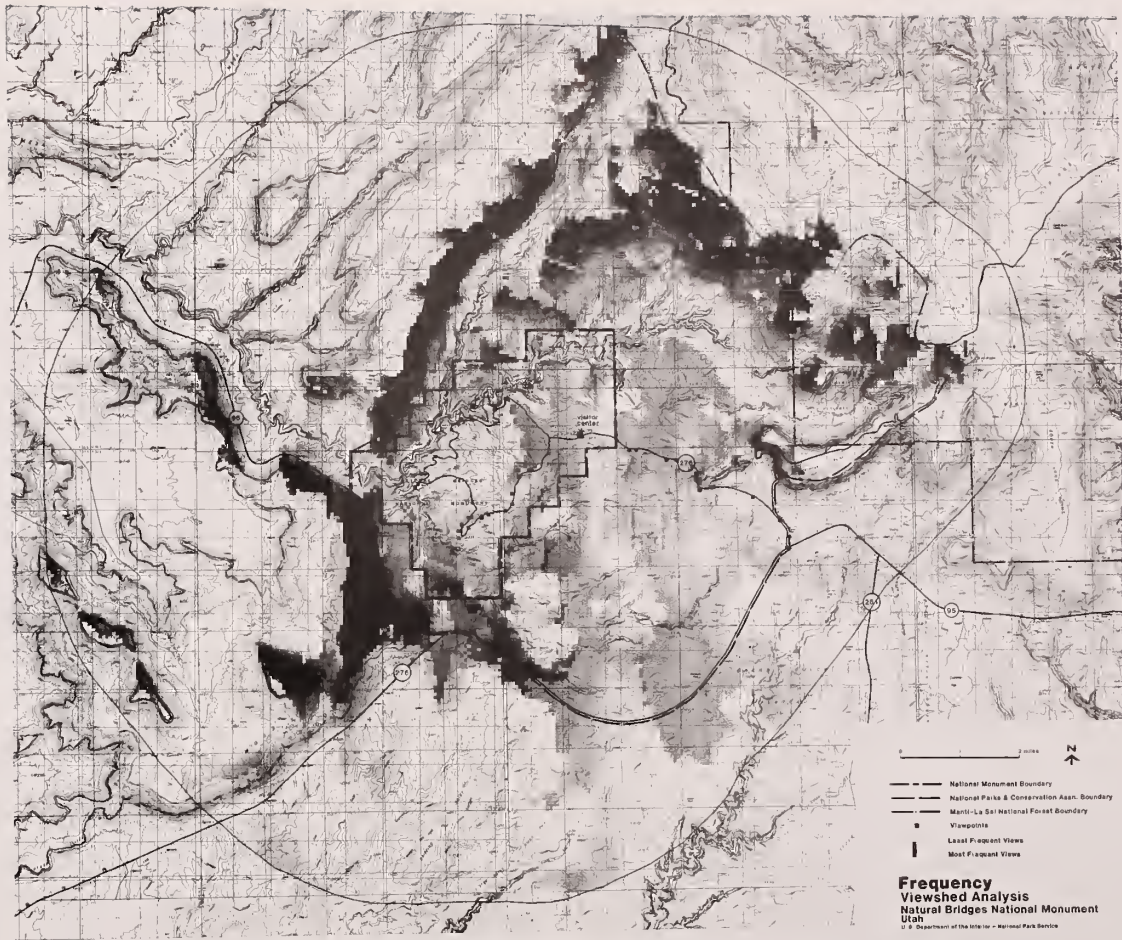
other impacts on the park's visitors and resources (see also the Proposal section of this plan). Actual levels of funding available to the BLM to conduct treatment, the element of controversy, and the cost of mitigation are all important determinants in decisions about implementing vegetative treatments in the Natural Bridges area. However, the NEPA process and guidelines, and requirements in law and in the policies of the neighboring land management agencies are legally required means to ensure interagency cooperation and to ensure the most practicable mitigations. The NPS concludes that no modification of the park is now necessary.

This conclusion is fully consistent with NPS Management Policies, which recognize that park boundaries may not

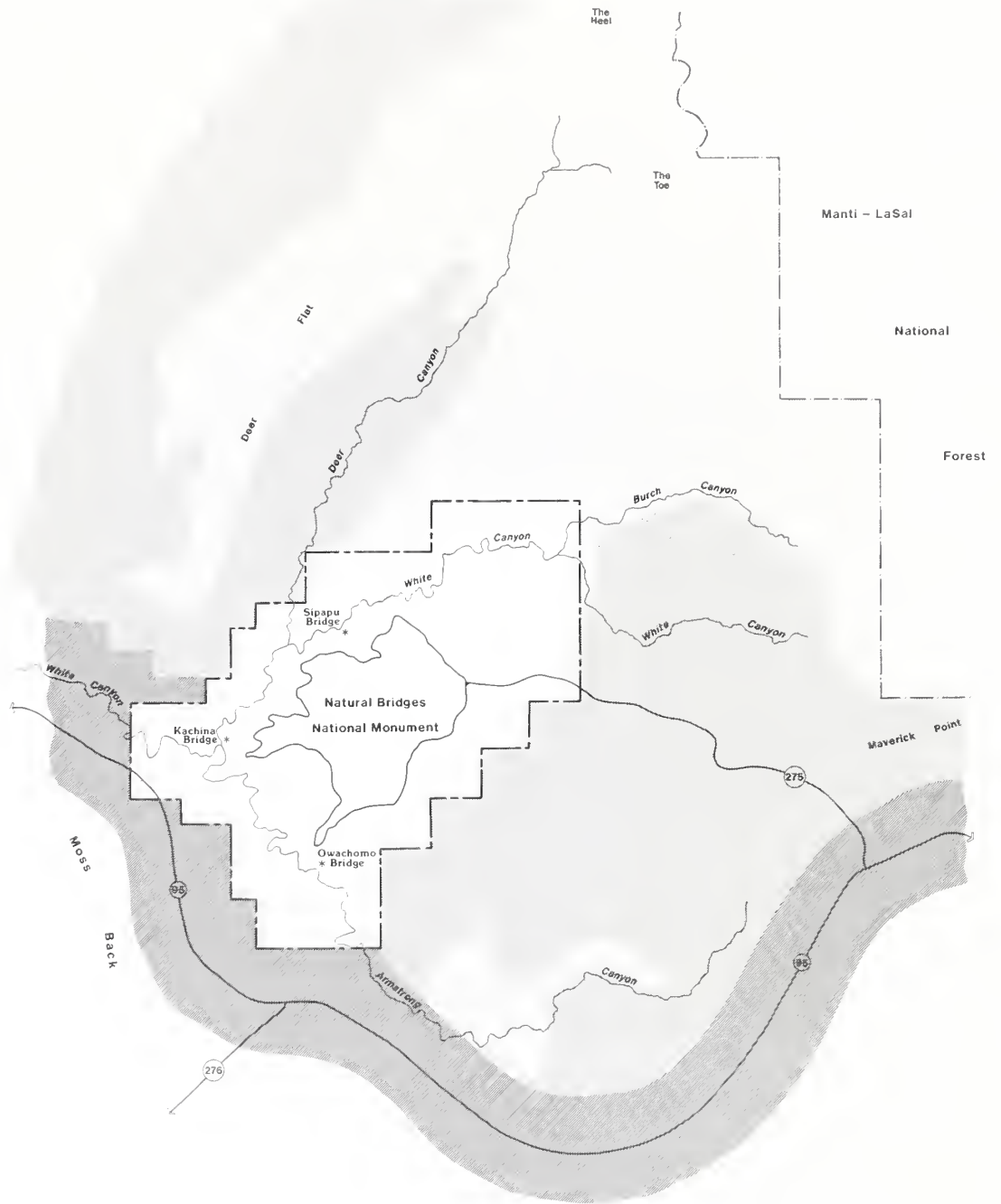
incorporate all of the natural resources, cultural sites, and scenic vistas that relate to park resources or the quality of the visitor experience, and that activities on adjacent lands may significantly affect the success of park programs. NPS policies also encourage formal agreements with planners and managers of adjacent lands, and pursuit of early coordination on specific proposals and projects to ensure that various points of view are considered in formulating proposals, and that potential conflicts are identified and avoided or resolved, if possible. Although the NPS does not propose to create buffer zones around parks, it will use all available authorities to protect park resources and values from potentially harmful activities.











--- Natural Bridges National Monument Boundary  
 - . - Manti-La Sal National Forest Boundary

VRM Class I (ACEC)  
 VRM Class II  
 VRM Class IV

(refer to text for description of protective standard)



0 1/4 1/2 1 mile

## BLM Visual Resource Management Zones (VRM)

Natural Bridges National Monument  
 Utah  
 United States Department of the Interior – National Park Service







*As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally-owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.*

A handwritten signature in cursive script, appearing to be "a".

Final editing of this public document was provided by Robert Sontag, Writer-Editor, Intermountain Field Area (c/o Planning Group, Stewardship and Partnership Team, Rocky Mountain Systems Support Office, National Park Service, Denver, Colorado, 303-969-2760). 1996.

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